

REVIEWS: COLORWORKS, RHINOCOM, PM PATROL and more

JULY/AUGUST 1995, VOLUME III, NUMBER 7

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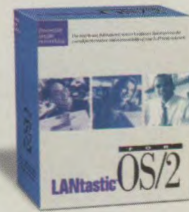
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SPECIAL REPORT

- 16 WorkGroup • BY BRADLEY D. KLIEWER, JIM WILLIS AND EDWIN BLACK**
A first look at a groupware line with such awesome potential that it could lead IBM's existing and future customers to a level of heretofore unknown productivity.
- 23 Tender Offerings • BY SARA AASE AND JIM WILLIS**
Find out what some of OS/2's key players think about IBM's buyout of Lotus Development Corporation.

PRODUCTS, REVIEWS & TECH TALK

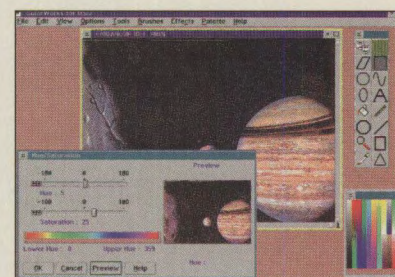
- 41 HANDS ON Walking the Beat • BY KELLEY SHADDRICK**
PM Patrol arrives in the nick of time, supplying system resource information in a clear, easily understandable manner.
- 43 DOT EXE**
Geoffrey Hollander reviews ColorWorks' landmark graphics program and Bruce Byfield takes a look at Rhintek's communications software, RhinoCom.
- 51 MARKETLINE**
A first look at OS/2's facelift, a Back-UPS bundle from APC and a shareware addict's paradise.
- 55 CODE CACHE Hot on the Trail • BY ROBERT MAHONEY**
Learn how to build the REXX Wrappers around the Bloodhound APIs for scheduling a document.
- 65 THE I.S. NOTEBOOK CID Part II • BY GORDON SCOTT**
Tips on how to let your network install OS/2 on client machines while you sit back and relax.

DEPARTMENTS & COLUMNS

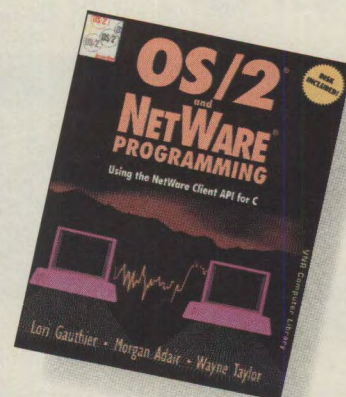
- 9 INPUT**
Congratulations, criticisms and observations from our readers.
- 13 BYTES & PIECES**
New numbers on getting Warped at home, a fix for XFolder and changes at PSP.
- 15 THE WIZARD OF OS/2**
Editor Bradley D. Klierer's accounting applications didn't allow pets—until REXX came along.
- 69 BOOKSTAX**
Olin Atkinson reviews *OS/2 and NetWare Programming* and Ken Mackin checks out *Mastering OS/2 Warp*.
- 72 THE VIEW FROM CHAOS MANOR**
Jerry Pournelle laments IBM's delay in getting him a copy of Warp Connect.



PAGE 16



PAGE 43



PAGE 69

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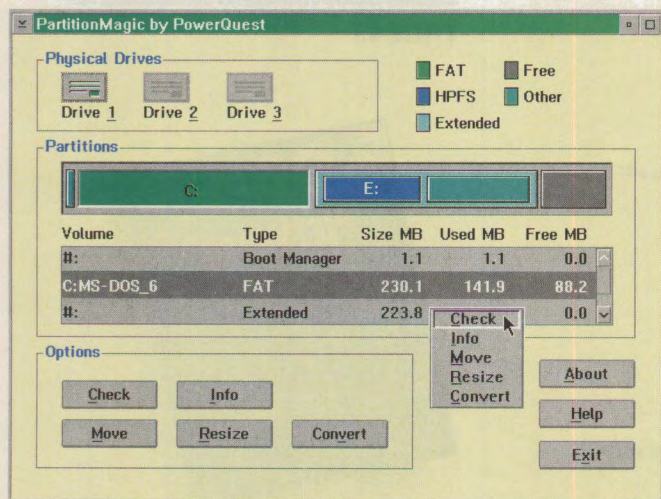
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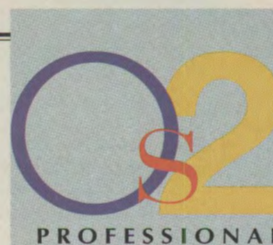
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Bloodhound One Year Later

BY EDWIN BLACK

It's been a year since *OS/2 Professional* discovered an unknown but powerful text searching product called SearchManager. We documented IBM's profound neglect of its own OS/2-based technology, which was symptomatic of its larger Warp crisis. We renamed the product Bloodhound, commissioned our own unauthorized IBM ads for a mere \$1,000 and began selling it through OS/2 Express. Overnight, a neglected product originally sold to fewer than 50 sites in its first year was selling everywhere. OS/2 Express at one point sold 10-15 copies per day. And suddenly, resellers large and small began hawking it. Calls for SearchManager support skyrocketed overnight. One source said IBM's support line used to receive just a few SearchManager calls each month. Now the team is supporting Bloodhound customers eight hours per day.

For many, Bloodhound became not only the new name of an orphaned IBM solution, but a rallying cry for what is wrong with IBM and OS/2. We received our share of accolades in the press and from users. Our poignant cover graphic—a body under a shroud with an IBM toetag marked *SearchManager*—became a painful symbol of everything wrong with IBM.

Software Solutions, the division responsible, took the heat. What happened next is a success story for IBM, SWS and for all in corporate OS/2. Things began to change at SWS. Believe me, they were changing without us. But our coverage put an intense spotlight on SWS that spurred the process. IBM sought our suggestions, with quick results.

The very same SWS people turned the situation around for subsequent products, such as DB2 and WorkGroup. Indeed, WorkGroup is the grandiose successor to Bloodhound and all its sister applications. This time, SWS general Manager Steve Mills announced the product with fanfare at EMAIL World. And SWS marketing specialists are now aggressively promoting the product.

Best of all, the style SWS displayed—from Steve Mills to tech-

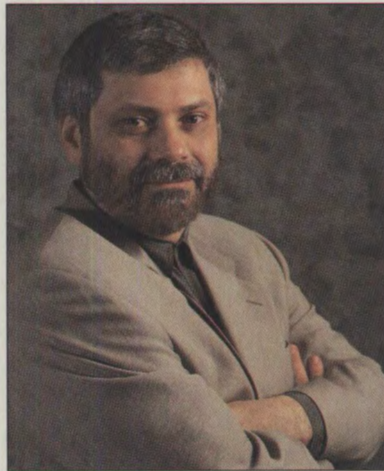
nical people and P.R. staffers—was primo classe. Just before deadline, we found major technical and feature problems that unexpectedly soured us on WorkGroup. Now remember, these IBMers are Bloodhound vets. So this time, instead of attacking the media, SWS defended its technology. They worked tirelessly with us showing what was right with the product, changing our minds by communicating WorkGroup's technologic and market assets. In the process, I learned that Steve Mills is no PSP-style elitist manager. He knew more than I did about what my own staff was discussing with WorkGroup technical people. Mills is a

hands-on guy. Eventually, we agreed—WorkGroup is the wave of the future. And its soon to be announced relationship to Lotus Notes could find it ruling business software within a year.

The SWS coverage triumph never could have been accomplished at PSP, which has lost its best press relations people, spends major dollars to advertise “OS/2 obliterates my software,” and has wasted the entire year trying—and failing—to develop a 1995 business plan for Warp promotion. It's sad. PSP once again is the object of snickers throughout IBM and the customer base as people wonder just when

Austin will be merged into a unit that means business. SWS is a perfect candidate to absorb and fix the mess. Until then, PSP continues the legendary arrogance of which IBMers past and present, including Lou Gerstner, have publicly complained. Calls are not returned to million dollar customers. Execs blatantly dishonor commitments and break contracts with seeming impunity. For example, every ISV who placed an advertisement in *Sources and Solutions* purchased a 700,000 circulation booklet. By now, they know that IBM has decided, without consultation, to circulate just 300,000. The Independent Vendor League is being dismantled, the OS/2 logo program is being dumped. And worse.

Right about now, the toetag on that old cover should read *PSP*. Fortunately, the new cover graphic for SWS is gears—working! ♦



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Comments, criticisms, and observations

Platform ponderings

You recently wrote a column advocating that IBM forgo Win95 compatibility and concentrate solely upon development of OS/2. I thoroughly enjoyed the column, thought it was well written and that it incorporated excellent arguments. After reading it, I posted a couple of messages in the OS/2 RIME Conference about it and received a variety of responses. As the threads progressed, several points came up which now have me thoroughly confused.

First, the question of Warp and Win95: has IBM announced it will support those apps in a future version of Warp? And if so, how? Some say IBM won't figure out how to support Win95, while others contend that Warp will actually run Win95 apps faster and better.

Second, IBM and ISVs now have the capability to quickly and relatively easily port 32-bit Win apps into native 32-bit OS/2 applications. Smart Tools and possibly Delphi can or will make the process much easier. If this is true, will the issue of Win95 support become moot?

Robert Tishkevich

Columbia, Maryland

As Mike Kogan outlined in his June column, IBM will offer a subset of the Win32 API so that developers who write Win95 applications can recompile their applications as native OS/2 Warp applications. However, this will require some vendors to modify their applications where an unsupported API was used. If IBM can convince Windows developers to take this approach, Win95 emulation will be a moot point. Realistically, until Win95 ships and Win95 applications become available, most of the announcements you hear will be speculation and posturing.

—**Editor's Note**

SLIPped and satisfied

Just wanted to say thanks a million for the articles on using another Internet provider [Hands On, February/Code Cache, March]. Without your help I would never have figured out how to set up a SLIP connection. Now that I have the SLIP working, how about another article on PPP connections and another one on getting the UltiMail Lite program set up properly?

George Camden

via the Internet

IBM blues

I was disappointed to see that Wally Casey [Q&A, May], who was expected to be the white knight who saves OS/2, is still caught up in the IBM mindset of arrogance, isolation and bureaucratic buck passing.

The world as seen from the eyes of IBM is one where the customer bows and accepts anything the all-knowing IBM tells them to do. IBM will never make it in the smaller competitive world with that perspective.

In spite of IBM, I think OS/2 will succeed—largely because of Microsoft's own bungling and new arrogance.

James G. Robertson

via the Internet

I must applaud your efforts to focus attention on IBM's asinine practices regarding OS/2. What concerns me about Warp is that IBM did such a sloppy job of addressing the issues of drivers and ensuring that the BonusPak programs actually could work reasonably well. I have yet to find a modem initialization string that works with P2P even though my modem works with KopyKat, OC and TE2. I deleted HyperACCESS since it is clearly inferior to ZOC. The IBM Works have virtually no documentation and are pure

guesswork to use. No thanks, life is difficult enough! I will stick with documented software, which leaves me with a BonusPak lite!

You also are quite right in your assessment of IBM's mishandling of OS/2 for Power PC. At this point, IBM should get its design people together and either decide to do OS/2 right (i.e., support it all the way), sell off OS/2 to a third party or release the OS/2 base code as a GNU license.

Paul Taube

via the Internet

As a computer veteran of more than 20 years I'm appalled about the general lack of management IBM is displaying, especially with regard to OS/2 (and PSP).

It's high time for Gerstner to save the day (what's left of it). Read up on Edwin Black's column and do something—follow through. Once OS/2 is living up to its potential, turn it over to someone who has a record of getting things done right!

There's a whole world of OS/2 users who have faithfully invested their efforts and futures into IBM's promise to deliver. I have bought a copy of every version (including beta) of OS/2 since 2.0. I've lost track of how many times I have installed it, but the excited anticipation of what I can do when I finish is unequaled. That excitement did not come true for me until OS/2. I'm sure my experience is not unique. Please don't let us down. Take back the helm, Louis.

Steve Szmidt

Los Angeles, California

Bundle them, please

Going on a RAID [Hands On, May] really interested me. Although a bit pricey as pure software utilities go,

EZRAID is very competitive with some hardware RAID adapters I've seen. I was concerned, however, that "EZRAID's drive configuration software is not as agile as FDISK" and that EZRAID normally disables FDISK "as a safety measure"; and that the user has to manually enable FDISK and use it to install and manage BOOT MANAGER and multiple partitions. In the same issue [The Wizard of OS/2] Bradley Kliever describes a utility, Partition Magic, which makes managing partitions convenient and easy. Why can't these two products be combined—i.e., Partition Magic with RAID, or maybe EZ PARTITION RAID MAGIC?

Avery Davis
via the Internet

If you decide to give EZRAID a try, I think you'll find its safety measure workable and (in a corporate environment) use-

ful. It will prevent users who may not be aware of the special partitioning required by RAID from deleting or changing the partition, yet it leaves a method for more knowledgeable users to manage standard drives. As to a combined product: I concur—especially if it could add a drive to the RAID without reformatting. I planned to suggest it, but I ran out of room (perhaps we need a new software product: Column Magic).—Editor Brad Kliever

Leaps and bounds

My system has an Amtron ISA VLB motherboard with Intel 486/66 MHz, 16 MB RAM in Bank 0 (4x4M 60ns chips), with two VESA adapters, a Diamond Viper video accelerator and Adaptec 2842VL SCSI.

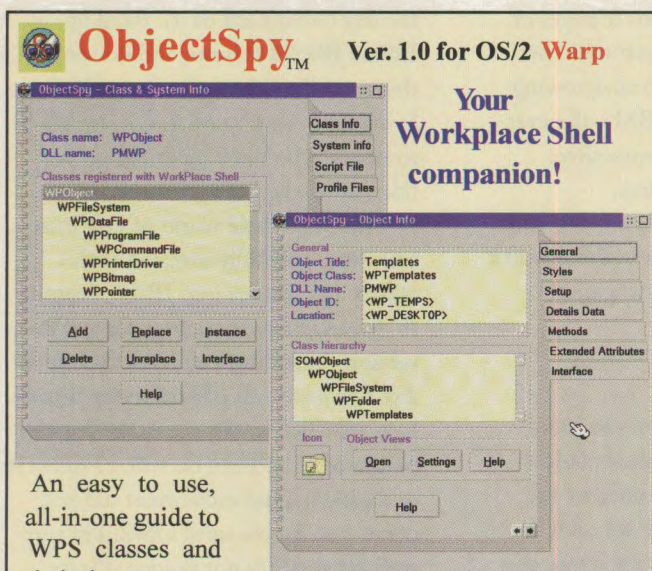
I have installed OS/2 Warp 3.0 and use it with the original Windows 3.1 that came with my system. Everything is working perfectly together. I want to

upgrade my system to 32 MB or more, but I have been told by IBM's OS/2 tech help that OS/2 will not address more than 16 MB of RAM on an Intel 486/66MHz ISA bus system unless "bounds buffering" is used. I was also advised that if my system had a MicroChannel or EISA motherboard this restriction would not exist, and OS/2 would address RAM flat, all the way out to 64G as it is supposed to. No mention was made of the PCI bus, nor would they explain what bounds buffering is except to say that it's a software driver.

What is bounds buffering? Does the bounds buffering restriction pertain to the PCI bus?

Edmond Jane
Washington, DC

The behavior you describe affects only ISA systems that have so-called "bus-master-



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ing" adapters (this would include the Adapter 154x series of ISA SCSI controllers). The DMA circuitry used for the bus-mastering cannot access memory above 16 MB. To prevent problems, OS/2 uses the memory above 16 MB as a bounds buffer—a swap area that works much faster than swapping to disk. Bounds buffering is not used on PCI, VLB or even ISA systems so long as no ISA adapters using 24-bit (rather than 32-bit) DMA reside in the system.

OS/2 snobs

In Bytes & Pieces [April], you lamented the fact that Ogilvy & Mather required media information in Excel format for applications for IBM advertising. You said "OS/2 Professional does not own a copy of any Windows software, and declines to purchase any."

If you did have a variety of Windows software around, you'd know first-hand

about the problems of Windows compatibility in Warp. IBM's advertising made it sound like "no sweat" and that just isn't the case. This is particularly true in communications and graphics applications.

Second, look no further if you are wondering why the rest of the computing world thinks of OS/2 users as platform fanatics who aren't interested in facts that don't fit their paradigm.

George Wiman
via CompuServe

There is a difference between using Windows apps internally, as in our advertising department, and having them available for testing and evaluation in editorial. If anything, we're probably best characterized as DOS fanatics as most of our day-to-day operations run on DOS applications. As recent surveys have shown, for nearly every Windows user

there's one who eschews Windows for just plain DOS. We now are switching from DOS to native OS/2 for many of our operational needs. We regularly test and configure Windows applications, though. None have convinced us to turn away from DOS or native OS/2. ♦

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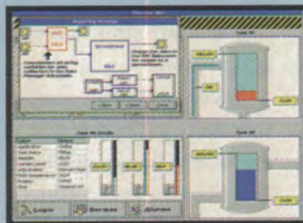
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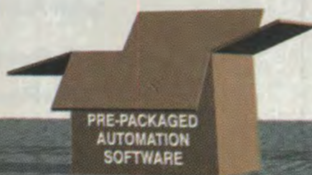


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BYTES & PIECES

News and trivialities, important and obscure

XFolder fumigates

For OS/2 developers looking to IBM for debugging help, Steven Rosenberry, president of The Desktop Company offers this advice: "Be patient. In the end they'll come through." The company recently had to wade through the murky waters of IBM's developer support when its XFolder, a utility for enhancing the arrange and align commands that allows users to manage the layout of desktop icons, ran into some incompatibility problems with Novell's WordPerfect.

XFolder users reported vanishing or corrupted desktops when XFolder was installed on machines running WP for OS/2 or the Integration Tools provided with WP for Windows. After supplying IBM with test code that emulated the problem, the company groped its way through the support chain until they found the right people to help them remedy the conflict. "Finally we were put in contact with the SOM group in Austin. They put in an amazing effort to get workarounds tested, working nights and weekends. It may have taken longer than we had hoped, but in the end we made a very important production deadline," says Rosenberry.

The conflict between WordPerfect and XFolder, which is resolved by a new SOM executable provided by IBM, took more than 5 months to remedy. It will be distributed with future versions of XFolder and the next Warp Service Pack.

Homewarp bound

Nearly half of all new OS/2 Warp customers bought the software for "home and family computing," according to a recent IBM press release that cited a "user profile" compiled by a Charlotte-based company called Upgrade of America.

Since Warp began shipping last November, Upgrade of America has randomly sampled more than 65,000 customers using registration data. Of the sample, 49 percent said they used Warp for home computing. Other statistics showed that 92 percent of Warp

users had modems, 71 percent had CD-ROM capability and 41 percent had systems with 16 MB or more of memory.

The survey had no margin of error and did not account for users who might have returned Warp, said Jeffery Levinson, vice president of OEM sales for Upgrade of America. Since the data was compiled from registration cards, it also may not have accounted for corporate users who didn't send in registration cards or who have IBM accounts.

IBM PSP Director of Marketing Wally Casey said he was "not at all" surprised by the numbers and that the profile "confirmed that we were on the right track." In attracting new users, Casey said, "(Warp) did exactly what we wanted it to do."

According to the press release, only 23 percent of home users were LAN-connected—IBM expects many home users wanting home connectivity were holding out for OS/2's latest addition, Warp Connect.

Casey said Warp Connect is the "perfect product" to round out the Warp family, but added that he expects it will attract more small and large business users than home users. "I would think it would be less than 49 percent," he said. "It's not targeted as a home user's product."

Our new standard

After evaluating several native and ported OS/2 word processors, *OS/2 Professional* has standardized on DeScribe. During years of procrastination, the magazine held fast to Microsoft Word for DOS, which had been the mainstay of Editors Edwin Black and Bradley Kliever for years. Since the magazine's inception in 1992, the editors declared their intent to adopt a native word processor, but stubbornly declined to capriciously move the mission critical function without exhaustive review, testing and test driving. "When you've been using one word processor all your computerized life—mastered it and tweaked it to perfection, you don't switch overnight, or

every other night depending upon what happens to come along," explains Editor-in-Chief Edwin Black. Black was the most stubborn in the company and the most unwilling to change. "We needed an extremely powerful and robust system that offered significant desktop publishing features," says Black, "yet is easy to learn for those who find learning inconvenient. And the word processor had to lend itself to the intense customization that magazine publishing requires."

Kliever adds, "The other leading contender, AmiPro, was too page oriented for acceptance." Black cautioned, "This doesn't mean that other word processors aren't right for other people. But for those few who must use a native OS/2 word processor 10 hours daily as an intimate means of expression and a tool for professional survival, DeScribe is the one." DeScribe will be reviewed in a forthcoming issue.

PSP loses Johnson

Allison Johnson, PSP's manager of media relations, has left the Austin-based division and transferred to the same position with the IBM PC Company in Somers, New York. It marks the second major loss for PSP media relations in recent months. Earlier this year, longtime Brodeur & Partners OS/2 media relations specialist Keith Lindenburg also transferred to the PC Company. In 1992, and 1993, Lindenburg was one of only two IBM media staffers who shouldered the entire OS/2 portfolio. He eventually left IBM to work for Brodeur & Partners public relations where he had the identical OS/2 portfolio. But then he transferred to the hardware side of the account. The departure of Lindenburg and Johnson, two of PSP's most capable and trusted media liaisons, is the latest in a string of staff changes for the understaffed PSP media relation group which is often criticized for its inability to communicate effectively with the press. ♦

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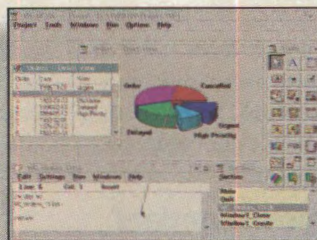
Peter Coffee, PC WEEK

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REXX for Rex

BY BRADLEY D. KLIEWER

My REXX programming has gone to the dogs. In the process, I've discovered what I love about this quirky little language—its ability to bridge gaps between the application software on my system. My latest work involves personal accounting. Soon after Panasonic introduced its CPA (Check Printing Accountant), a calculator-like electronic checkbook with a built-in printer, I bought one for my wife, Sue. She writes most of the checks, but hates recording and balancing the checkbook. Not only did the CPA keep her records up to date, but it helped me reconcile the statements at the end of the month (at least now I knew the math was right).

The CPA was saving so much time I decided to buy another for myself and an interface that transfers data from the CPA to a computer through a serial port. It also includes a DOS utility that converts the file into QIF format, which can be imported to Quicken. The only problem is that the CPA account categories are more limited than I like. A case in point is our dogs: the best category I could find was *household*, but I really wanted *pets*. Furthermore, while our two Newfoundlands definitely classify as *pets* (and spoiled ones at that), we're raising a Golden Retriever for Helping Paws, an organization that trains dogs to assist the physically disabled. All of the vet and other bills and expenses for Helping Paws are tax deductible, so I like to categorize them differently.

REXX to the rescue! Using its excellent string-handling functions, I wrote a program that scanned the CPA QIF file for memo entries for the names of the dogs (Kirby, Ruby and Leo). It changed the category for Kirby and Ruby transactions to *pets* and the category for Leo transactions to *charity*. I also added procedures for specifying payroll data in deposits (to split transactions into the appropriate withholding categories) and managing account transfers between savings, checking and automatic payments.

While it took a few hours to program, the time savings have already had a profound effect on my life. I've already written about the time I've saved preparing taxes [Wizard of OS/2, March], and for the first time in years I avoided an extension on my filing deadline. Thanks to REXX, the automatic category adjustments save me an hour or two each month in manual adjustments. And reconciling statements has dropped from a few hours to under 30 minutes. With the refinements I've made since filing my 1994

taxes, next year should go even more quickly.

Currently, everything is command-line driven. My next project will be writing a GUI front end that makes the process simpler for Sue. I'll probably use VisPro REXX to develop the interface—I've been working with VisPro C and have been impressed with its code style (it writes like me), so a HockWare REXX front end should lend some consistency to my development efforts.

You may notice that the applications are still DOS and Windows, but the glue that binds them as an efficient processing

platform is OS/2. REXX is only one part of the chemistry—it provides the link. OS/2's multiple windows are the other critical ingredient, particularly at tax time. Overall I'm saving loads of frustration and hours of time each month. I'm not waiting for the next revision of applications or operating systems with whatever whiz-bang features they may promise. OS/2 Warp is making my existing applications and platform more productive—and isn't that what computers are all about? ♦



Note: A typographical error appeared in the May issue's Wizard of OS/2 column, misleading some readers into believing that Editor Bradley Kliewer uses DeScribe version 5.1. The correct version number should have been 5.0.



GEARING UP FOR WORKGROUP

BY BRADLEY D. KIEWER,
JIM WILLIS AND EDWIN BLACK

IBM HAS FORGED A NEW
SET OF TOOLS FOR CORPORATE
AMERICA. THE FINAL MACHINERY
WILL REQUIRE A CHALLENGING
ASSEMBLY. BUT THE END PRODUCT
WILL DELIVER A POWERFUL
PRODUCTIVITY EDGE.

It's no wonder IBM has a history of Star Trek code names—so much of its technology is designed for the enterprise. That tradition continues with IBM's first WorkGroup offering, a powerful integrated array of functions and products that will allow an entire company of diverse thousands to work with team-like cohesion. Ultimately, WorkGroup will combine most of Software Solutions' best known applications, and then some. Today, WorkGroup is IBM's most powerful group product built with some of America's largest enterprise networks in mind. Eventually, perhaps within a year or two, WorkGroup will enable group shared functionality in companies of 10 to 100 to hundreds of thousands. As such, WorkGroup delivers the ultimate promise of OS/2 productivity and can become the destiny product for IBM, OS/2 and international businesses large and small. Indeed, although entire universities and banks are already running group activities on WorkGroup, IBM's main promo video documents the case study of a small New Jersey orthopedic practice that has revolutionized its office activities using the product. Even a group as small as *OS/2 Professional's* 10-person editorial, production and administrative team is using and benefitting from WorkGroup.

The first of WorkGroup's three modules, the Group Communications package, is now shipping. Its components include UltiMail, Time and Place/2, IBM's own enterprise phone book, directory and shared fax software and a so-called Agent to allow extraordinarily simple and powerful personal customizations. The second module, the so-called Work Management package, delivers the decision support and modeling of Flowmark added to FormTalk, which produces, tracks and routes forms. WorkGroup's third module, Information Management, assembles the awesome combined power of Bloodhound's search abilities, Visual Document's enterprise-wide version control, ImagePlus VisualInfo document imaging and processing, data analysis from Visualizer, BookManager's electronic book capability, and to top it all, video conferencing that allows

staffers worldwide to use WorkGroup's shared resources in real time via Person to Person.

WorkGroup's potential is so awesome that it must be understood not as a product but rather as a path that, step-by-step, will lead IBM's existing and future customers into a level of heretofore unknown productivity. At its most basic, acquiring WorkGroup can be nothing short of a smart move by an IS manager. Confronted correctly, WorkGroup can be a major move into ever increasing levels of productivity.

Because WorkGroup is so complicated and enterprise directed, IBM has targeted not the average Warp using company, but leading enterprise customers who will acquire the product from the blue suit force or from other resellers. The shrink-wrap packaging and seemingly friendly install program belie the fact that the initial WorkGroup program targets major enterprise installations. IBM is ready to supply the technical customization and support to make WorkGroup happen in any environment, from mainframe to client-server. Now that IBM has devoured Lotus Development Corporation, one can only wonder whether WorkGroup will proceed to rival, marry or cohabitate with Lotus Notes. The best guesses at press time believe that the destinies of both are now intertwined. In many ways, WorkGroup is the key to IBM retaining its existing customer base, and adding the new ones it needs to stay vital in an increasingly Microsoft world.

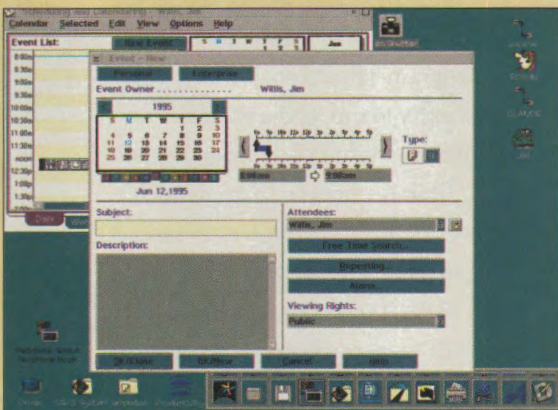
Prerequisites

WorkGroup builds upon an existing base of IBM technology. As such, you will need a fairly substantial hardware and software investment to begin using the product. Many networked OS/2 users will already have the prerequisites in place with the possible exception of DB2. The WorkGroup server must be an OS/2 2.1 or OS/2 Warp machine with a communications protocol (TCP/IP, NetBIOS or IPX) and DB2 (single user or client/server). If you plan to use NetBIOS, you must also have LAN Server installed on the same server as WorkGroup to provide named pipe support over the network. For small groups willing to take on

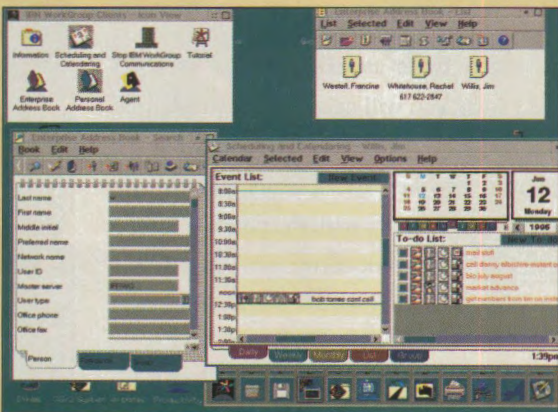
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To really reap productivity from WorkGroup the functions must not be seen as standalones, but as interactive tools.

the configuration task, that leaves TCP/IP as the more economical route since TCP/IP ships with Warp Connect.

Unless your LAN Server runs a fairly light load and is well-endowed with speed and memory, you will need a dedicated WorkGroup server. With DB2/2 and LAN Server 4.0 installed on our Minneapolis office's 486/66 machine with 32MB RAM, WorkGroup strained under the load of nearly a dozen clients—many using the server for intensive database access. On the other hand, a similarly configured Pentium/60 in our Rockville office, used primarily for printer and word processing document sharing, deftly handled the load.

The client load, however, is another story. Our 16MB 486/33 clients took clear performance hits while running WorkGroup. But performance problems paled next to the integration issues we faced during configuration.

Installation

The substantial skills required to install and customize such a complex enterprise product in its 1.0 incarnation may overwhelm a small business. That need not bode ill for the future—in its first release, the current major workgroup market leader, Lotus Notes, gained a reputation for difficult installation that would make installing WorkGroup seem like child's play.

A combination of our system idiosyncrasies and the inherent difficulties of WorkGroup compelled us to install and reinstall the product. This gave us a lot of insight and experience into potential pitfalls—both user-based and integral to the product itself. Our installation problems may not be typical. But they will demonstrate how complicated the process can be when bringing WorkGroup into any sophisticated computing environment.

Upon our first attempt at server installation, we discovered that the database used by WorkGroup could not bind to the DB2 for OS/2 version 2 beta. According to IBM, the problems reside in the DB2 beta code and the DB2 development team promises to resolve the problem by DB2 version 2's July 28 release. Therefore, to test the application on a working platform, we installed DB2/2 1.2 on our primary LAN Server 4.0 system. This second installation proceeded flawlessly, and for several hours Minneapolis had a working WorkGroup server. Unfortunately, a disk subsystem crash corrupted the WorkGroup database. Our third reinstall did not run smoothly—although WorkGroup detected and deleted the previous installation, we suspect that the corrupted DB2 database prevented success.

We were also hit by a bug in the error reporting. One appar-

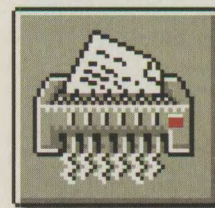
SPECIAL REPORT

ently successful WorkGroup install reported a NetBIOS error on startup because of an "unavailable" DLL. We eventually traced the problem to the abortive install running in a minimized session on another machine. You can also prevent problems by carefully monitoring changes to CONFIG.SYS and .INI files when several products are sharing multiple adapters or protocols. For example, the Rockville system required tweaking to reestablish LAN Server for Macintosh running on a second Ethernet adapter. We would note that all of our problems would have been avoided by running WorkGroup on a server dedicated solely to WorkGroup.

With the servers installed, both Minneapolis and Rockville hit snags in the client installation. Several machines suffered desktop meltdowns (and frozen screens) immediately after rebooting with WorkGroup. Unfortunately, the UltiMail portion of WorkGroup is not compatible with the UltiMail Lite in Warp's Bonus-Pak. You must remove all UltiMail Lite CONFIG.SYS references and desktop objects before using WorkGroup. Worse, despite the similar names, UltiMail is not yet a true upgrade to UltiMail Lite. WorkGroup does not contain UltiMail Heavy. For example, the WorkGroup package cannot access SLIP connections for coexistence with Warp's Internet Connection. However, *OS/2 Professional* has been told that you can use UltiMail Lite to replace WorkGroup's UltiMail if you use TCP/IP connections to the WorkGroup server. These issues may not affect large corporate sites, but will certainly hamper acceptance by small businesses. The 2.0 release, tentatively scheduled for late 1995, will integrate the functionality of both UltiMail and UltiMail Lite.

A conflict between UltiMail and the WPS can influence the way the UltiMail icons behave on the desktop. In its most harmless manifestation the conflict simply prevents the user from starting the UltiMail program via its respective icons. Instead the user must go through the roundabout procedure of selecting a person from the Enterprise Address Book and click on the "New Letter" icon on the EAB's Toolbar to start the application. Once the application is up and running though, all of its various facets—In-Basket, Mail Cabinet, New Letter—can be accessed and then minimized for later use. When the conflict gets totally out of control it corrupts the entire desktop, destroying all of the WorkGroup icons and then some. This conflict has been reported to the WPS specialists and should be corrected by the next CSD (Corrective Service Diskette)—which should be available before this issue hits the stands.

The Best Time to Get Back Again/2



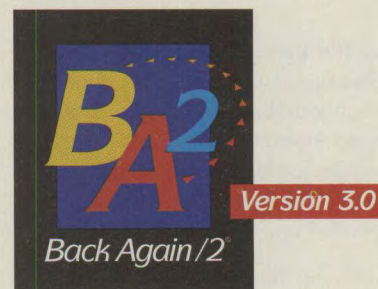
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Q & A

Meeting Steve Mills



Many say the Software Solutions division is the key to IBM's future and OS/2's continuing success. Its General Manager, Steve Mills, is generally unknown among Warp aficionados. Yet he is among Louis Gerstner's top executives and was deeply involved in the recent Lotus acquisition. On June 9, just days after the Lotus acquisition was announced, *OS/2 Professional* editors questioned Mills. An edited transcript follows:

OS/2 Pro: It's been about a year since *OS/2 Professional* very critically covered a product called Search Manager, which we renamed Bloodhound, and the problems surrounding it. But a lot has happened at SWS to change for the better since then. Tell us.

Steve Mills: No denying that IBM was late to the party in client server software. You know that became clear to us. We

took action to remedy that and began to work on workstation software to serve customer needs, have more effect on our own destiny and make money. Our challenge was to knit our diverse technology into broad solutions. So you see something like SearchManager, a really good product in and of itself, which seems to be disconnected from a broader solution to the marketplace and therefore not necessarily well sold or promoted. Since I took over this position, I've been systematically knitting these pieces together, beginning with our flagship relational database product DB2. We filled in the surrounding functionality within data management, then moved into the application development tool space and then finally embarked upon our WorkGroup portfolio.

As SWS general manager, you are a peer to PSP General Manager Lee Reiswig. All of our readers know his name. Few or none know Steve Mills. Yet you and your division are very important to the future of OS/2. Why don't our readers, your customers, know you better?

Clearly, the product portfolio we're delivering is newer than OS/2, so the discovery is continuing. Fact is, we have been getting significant ink on our product line. There was tremendous publicity on DB2 for OS/2—we've already shipped half a million copies.

Why do you feel the market is ready for a product like WorkGroup?

There's a big shift in business computing. It's a convergence between traditional centralized applications, desktop productivity and simple client/server printshare/fileshare. Departments need a portfolio of functions allowing them to communicate

with each other and collaborate around information. Some customers are even moving towards automated workflow type. WorkGroup addresses these things.

Why did IBM acquire Lotus? And what does it mean to SWS?

It means we accelerate our drive into the client/server marketplace. Lotus brings a very strong presence at the desktop. IBM is mostly coming down from above. Strong enterprise skills, very knowledgeable about the server side of the business. IBM has clearly had desktop presence in OS/2, measured in millions of desktops, but beyond OS/2 itself our desktop portfolio can't be measured in that level of volume.

Considering Lotus Notes, can we expect WorkGroup to remain an identifiable product a year from now?

IBM's portfolio is quite complimentary to what Lotus delivers. We deliver functional enhancement and extension of capability not in the Lotus portfolio today. We'll have to work on the naming convention and I'm not going to prejudge the answer. I don't think I have to tell you that the whole area of naming and branding can help you in the marketplace or confuse people and hurt you. We're going to have to make some decisions and frankly, we're not going to make them alone. We're hopeful that the Lotus team will join us and therefore they will be clearly a part of future discussions on this. We can't speculate on how that will work out. I'll tell you this: we're not going to withdraw capabilities from the marketplace.

Thank you, Mr. Mills.

Additional excerpts from the Mills interview will run in a subsequent issue. ♦

SPECIAL REPORT

It's Up and Running. Now What?

When sitting down to explore WorkGroup for the first time, the sight of objects such as an In-Basket, Scheduling and Calendar-ing, Enterprise Address Book and a Personal Address Book might just mislead you into thinking that you are finally going to get organized. But, until you can get the hang of how to use these "functions" (as the WG'ers refer to them) organization is still a long way off. When using the scheduling function, for instance, it could actually take you longer to schedule a meeting than it would to sit through the meeting itself. However, once it becomes clear that these functions were designed not to be independent applications but rather interacting productivity aids, swiftly flowing organization and communication between co-workers becomes very real.

Using WorkGroup to address the needs of our small office—messaging, a phone book on the server, scheduling—at first seemed like using a sledgehammer to pound a thumbtack into corkboard. Indeed remarks such as "I have to do all that just to add something to my To-Do list?" were heard frequently as folks around the office started investigating the new tool. Once the potential power of the scheduling and calendaring functions started circulating though, we started hearing a lot more of "You're kidding me. I can do that?" Once the concept of many staffers combining their personal phonebooks into one powerful system-wide phonebook dawned on people, excitement really started building.

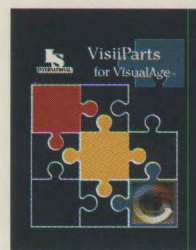
But all the excitement of promised productivity must be tempered when adopting WorkGroup. Don't be fooled. Its calendar and address book are not quick and easy PIMs, like Lotus Organizer, Relish or Arcadia, souped up for the enterprise. Work-Group's directory and scheduler is intended to organize thousands of staffers in one location or dozens. As such, it is slower, more difficult to set up and just plain old stuffier.

Scheduling and Calendaring

The Scheduling and Calendaring function of WorkGroup differs from other less powerful information manager programs because it allows all of the users' calendars to work together. If you want to schedule a meeting with another user you fill in the time slot on your calender and then, using the Enterprise Address Book—a resource shared by all users—add the other user as an event participant. Your request for the other user to participate in the meeting, phone call, etc., is then sent to them. The request-



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July/August 1995 OS2 Professional 21

SPECIAL REPORT

ed participant can either decline or accept the invitation. If they accept, the event is added to their schedule. This capability can be immensely important for an organization of numerous, diversely located staffers, especially for those with the authority to summon meetings.

Even more helpful is WorkGroup's ability to clearly disclose who is available. All authorized members can view other staffers' calendars at a glance. Each staffer has the right to designate their meeting public or private. Hence, anyone who wants to have a morning meeting next week with Executive Joe, for example, would see he is still travelling on Monday morning, Tuesday morning his time is blocked out for an unstated purpose and he is available the other mornings until 11:00AM. To make things more interesting, add to this scenario Executive Wally, Executive Dan, Executive Pete and Executive Joann. WorkGroup knows their schedules and in a heartbeat can give you the first available date all of them are free for the requested meeting. That is productivity.

The larger and more spread out the organization, the more precious WorkGroup scheduling can be. However, its implementation in a small office with a lot of face to face contact, such as ours, has not put an end to the all too frequent shouts of "Edit team! Meeting in five minutes!"

Enterprise Address Book

Sheer power vs. scalability is encountered again in the Enterprise Address Book function. The EAB is the same phone book that IBM uses to list and keep track of its quarter-million employees. And since IBMers change job divisions and locales so often that their business card printer gets whiplash, the IBM phone book is a technological marvel indeed. How much time is wasted chasing down phone numbers in your company? We do it all day in our office. A shared phone book can be a major productivity asset. That's where the EAB comes in

But again, scalability is the issue. It's best not to think of WorkGroup's EAB as a souped up network Rolodex. The EAB is actually a powerful enterprise directory, filled with lots of fact slivers about individuals, including lots of job and locale descriptions and comment lines. You access it not by popping an alpha tab, but by launching a search. This means you can not only get the phone number of Joe Blow, but you can search for any Joes, Blows, B*, all listings in Phoenix, all managers in Europe, and if you tweak the system right, all managers in Europe with passwords to the Phoenix office who report to Joe Blow. That's power.

Moreover, the EAB also contains the objects representing everyone on the network. This aids in the binding of this function to the mailing and scheduling parts of WorkGroup. You search for an individual or a user-defineable group, select the users you want from those the search turns up and send them a message or add them as participants in an event.

Unfortunately, the EAB is a little stupid in the usability department. For example, the first name we entered was that of Steve Mills, SWS general manager. We had to enter him not as a source, but as an "external user" of our system without a password. That makes no sense. Also, as currently configured there is no provision for a second office or other alternate phone number. Some people have them. And general users can't add, delete or update entries; only designated administrators can. Moreover, the easier to use Personal Phone Book cannot easily add an entry to the EAB.

Now we know there's a good reason. The EAB is built for thousands of users and tens of thousands of phone numbers. One of the smallest WorkGroup users to date has 8,000 users. Eight thousand people cannot capriciously add and delete data from the company directory. That means that until a departmental or truly group-shared version of a simple and browsable network phone book is created, WorkGroup's EAB will be big and powerful, but not that smart. Fortunately, the people at SWS are smart and they have assured *OS/2 Professional* that work on an easy-to-use network phone book for small authorized groups—say a department or small company—is underway.

One obvious idea is to add functionality to the Personal Address Book. While the PAB works in conjunction with the other WorkGroup functions, it resides on the users' local drive and is not shared with the EAB. By endowing the PAB with a "Make Public" function that would make the particular entry available to selected WorkGroup users, IBM could move forward in making WorkGroup flexible enough for both David and Goliath.

The Agent

The Agent, another pillar of WorkGroup functionality, is sure to provoke a lot of curiosity for WorkGroup first timers. If DB2 is the brain that handles all of WorkGroup's information, clicking on the Agent icon pulls up what is certainly the central nervous system. It links together in a very functional way the multiple features of WorkGroup and allows these features to interact seam-

continued on page 68

TENDER OFFERINGS

BY SARA AASE AND JIM WILLIS

When the news of IBM's \$3.3 billion offer for Lotus Development Cor-

poration broke, some heralded it as the OS/2 battle cry heard 'round the world. Others hardly noted Big Blue's bid to buy out one of the largest OS/2 software developers, brushing off the move as an almost inconsequential dent in IBM's \$10 billion purse. With the deal now confirmed at more than \$3.5 billion, it's difficult to resist speculating on how the buyout will affect the OS/2 marketplace—especially in light of IBM Chief Lou Gerstner's remark that the takeover "has absolutely nothing to do with OS/2."

Despite Gerstner's statement, many see the buyout as a big push for the operating system. "Basically, if anyone ever had any doubts that IBM is as serious as a heart attack that they're completely committed to PC and OS/2 apps, they shouldn't anymore," says Joel Krauthaim, president of SPG, an OS/2 Independent Software Vendor (ISV) and maker of ColorWorks.

Interpretations and emotional pitch vary, however, when it comes to forecasting the effects the buyout will have on OS/2 ISVs. Jim Lennane, president of DeScribe, had only venomous words for IBM and its Lotus pursuit. While he conceded that the deal makes good business sense, he says his company was lured to produce for IBM and then betrayed when IBM chose to buy up and market competing OS/2 applications. A Lotus deal, he says, will be the end of many independent OS/2 products.

Whether seen as a boost for the OS or a betrayal of the ISVs, there is little agreement over what effects IBM's Lotus buyout will have on the OS/2 marketplace.

"From our standpoint, it's just a natural progression of the treachery in dealing with IBM," Lennane says. "There should be a corporate morality. If you seduce someone and then dump on them, you should clean it up. This move is going to completely obliterate the potential of at least three vendors within the next 12-18 months because IBM will give the Lotus SmartSuite away. The only ethical thing for IBM to do at this point is to pay back our investment money."

Elaborating on his concerns about fair play, Lennane brought up the SEC's 15-day period during which objections to the Lotus deal could be filed, but would not specify whether DeScribe has taken such action. He did, however, express his objections directly to IBM, complaining to Senior Vice President John Thompson of "no level playing field."

While not everyone concurs with Lennane's stark view, some vendors do question what's to become of their relationships with IBM. David Pollak, president of Athena Design, received a call from Jim Gant, a vice president in IBM's Solution Developer Operations department, who expressed IBM's continuing commitment to ISVs. Does Pollak believe him? "I believe they still want to cooperate with ISVs," he says, "because if every OS/2 vendor left the market tomorrow," IBM's own market viability would plummet.

At press time, sources at Corel told OS/2 Professional that as a direct result of IBM's Lotus acquisition, the company was ceasing all OS/2 development. This includes CorelDraw 6.0, the Corel CD Office suite and OS/2 applications for the PowerPC.

Pollak wasn't the only one to express uncertainty about how the OS/2 and Lotus relationship will pan out. Brad Wardell, president of Stardock Systems, wonders where IBM will push its new acquisition's applications. "It will be interesting to see if they are going to heavily market the Windows apps that Lotus has developed or if they are going to stand behind and really push Lotus's OS/2 applications," he says.

Questions also arise concerning the Lotus products that directly compete with IBM's current range of OS/2 applications. "It makes me a little apprehensive," says Randell Flint, president of Sundial Systems. "It raises the issue of the firewall between the applications and systems divisions—what Microsoft has been dealing with. For the most part, IBM hasn't had conflicting desktop applications. It's a fine line and since [IBM] hasn't had to walk it before, we hope it comes out all right." And then there are the competing apps themselves. "What will happen to UltiMail vs. cc:Mail and things like that?" Flint wonders. "And the Star office products were supposed to get a very large push [from IBM], but one would assume that's now directly competing with Lotus products. And Work-Group—how does that compete with Lotus Notes and cc:Mail?"

Perhaps someone who has been on both sides of the fence can best predict the long-term future of the OS/2 market. "I don't think the OS/2 vendors need to be more concerned this week than they were last week," comments Sharon Manuel, vice president of retail products for Footprint Software. Footprint Software, a former OS/2 ISV, was recently acquired by IBM. "IBM is already heavily marketing the Lotus SmartSuite and Lotus is a big player even without IBM. So I don't foresee it [the buyout] as having too much of an effect on ISVs," says Manuel.

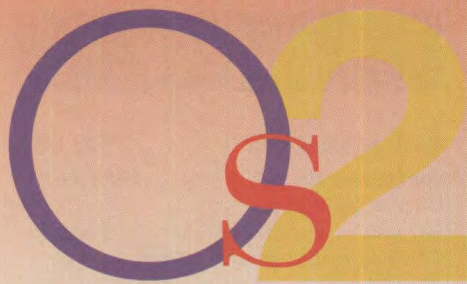
Manuel, in fact, sees the buyout as part of a larger trend in the software industry. "The concentration of power in the hands of a few large companies threatens development in smaller companies," she says. The solution she sees lies in the development of componentry. "People are looking for precisely the right solution and as a result the whole market is moving to component software. Small, independent vendors, if they want to stay alive, will have to focus on powerful, high quality components that plug into a niche," says Manuel.

And how is corporate OS/2, who must use the software and make purchasing decisions, affected by the buyout? Flint made this observation: "Clearly, if you are a corporate buyer of OS/2 software and are about to make a major decision, you'd put it on hold until this shakes out." ♦



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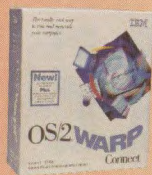
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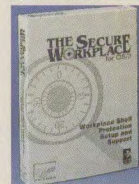
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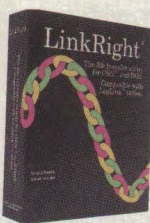
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PCX

Linkwiz is an OS/2 and DOS/Windows File Transfer Utility with an up-to-2 mbps transfer rate over parallel cable. It's extremely easy to install and use. Native OS/2 code supports Presentation Manager, extended attributes, long file names and 32-bit I/O. Includes both a parallel and serial cable.

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C.O.L. Systems Inc.

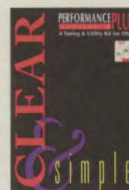
Osm2 Lite is the OS/2 analyst's professional tool for monitoring performance and reporting on CPU, IRQ, Memory, Logical Disks, Physical Disks, Paging, Swapping, FAT/HPFS/HPFS386 caches, Applications, Threads, Files, IBM Lan Server and Lan Requester. Uses OS/2 REXX for reporting. Certified OS/2 and OS/2 LAN Ready.

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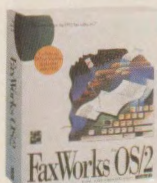
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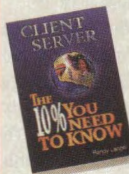
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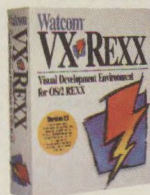
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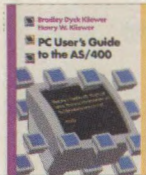
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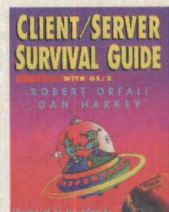
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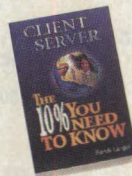
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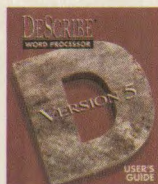
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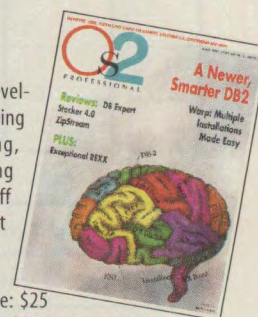
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HANDS ON

Walking the Beat

PM Patrol provides power users and programmers with the utilities they need to peruse their system resources.

BY KELLEY SHADDRICK

Today's advanced PC operating systems are getting larger and more complex with every release. Companies and developers spend months—even years—and millions of dollars getting them to endusers. Alas, with all their vast resources, do they put everything into them that we might want? Unfortunately, no. Some options are left out in favor of others, some are completely overlooked and some are not as user friendly as they could be. But have no fear, it's utility software to the rescue. These utilities arrive in the nick of time to supply missing or overlooked applications or to make those that are cryptic more understandable. One such utility is PM Patrol, a resource management program for OS/2 from MSR Development Corp., of Nacogdoches, Texas.

Installation

PM Patrol arrived on a single 3.5-inch diskette with a 100-page manual. I promptly did what all good PC users do: ignored the manual and loaded the software. My PC is a 486/50 with 12 MB of memory and 480 MB of hard disk running Warp. The install was straightforward, first displaying a screen asking where you want the software installed and where it's installing from. As with a lot of software these days, the program then displays a screen asking for your name and the product's serial number. After entering all the required information, the software installed without a hitch.

After shutting down and rebooting my PC, the first thing I noticed was the PM Patrol status line running across the bottom of the screen. At first I thought this would be just another thing cluttering up the desktop, but after awhile I found it to be one of the most handy things on it. The status line is completely con-

figurable, displaying everything from the current date and time to drive status, memory and CPU utilization. The status line displays these parameters in numeric format, although some of these can be displayed in bar graph format.

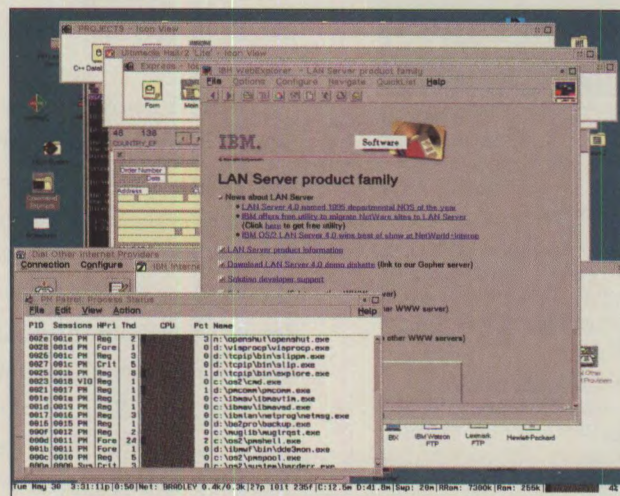
What's Available

Positioning the mouse pointer on the status line and pressing the right mouse button pops up the utility menu. This menu gets you to many of PM Patrol's goodies. Here you can turn on Logging, a facility that lets you record all of the PM Patrol monitors to a file for later analysis. The Drives option lets you specify up to six drives you want PM Patrol to monitor. There's a Fast Format utility for diskettes and a utility that lets you work with OS/2's spooler.

The Programs option lets you add your own programs to this menu. The Desktop option provides fast and easy access to desktop folders. With the addition of the launch pad in Warp,

however, I'm not sure I'd use this very often. The Scheduler option is a nice addition to OS/2. It allows you to set up a list of programs to run at specified times and up to 128 programs can be specified.

The Drive Info options can tell you more than you might ever want to know about the hard drives in your PC. The Drive Map option is a nice utility: it displays a bar graph that tells you at a glance which directories are using the most disk space. The System Info option complements the Drive Info screen by providing a ton of information on your current OS/2 configuration. And the Fast Find option offers a way to hunt down those elu-



While PM Patrol's status line may at first appear to add clutter to your desktop, you may soon find it an indispensable tool for resource monitoring.



The graphic features a large, stylized CD-ROM with a rainbow-colored outer ring and a grey center. The text "Unite CD•Maker™" is written vertically in large, bold, blue letters along the left side of the CD. Below this, the text "CD-ROM Mastering FOR OS/2 WARP" is written in bold, black letters. To the right of this text, there is a small illustration of a CD-ROM with a series of blue dots along its outer edge. Below the CD-ROM, there is a list of features in a bulleted format, followed by a paragraph of text and a phone number.

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HANDS ON

sive files on a single disk or across all drives.

One of the best utilities is the Process Status utility. It allows you to monitor all active OS/2 processes, threads, shared memory, DLLs and CPU use per process. Using the information displayed here, you can kill any processes that have erred out and don't respond to other methods of canceling them. This is a very handy utility that I have used a number of times.

Positioning the mouse pointer on the status line and double clicking the left mouse button displays the PM Patrol Options screen. The first option is the Utilities menu, which is the same one discussed above. The next, the System menu, has options to show you the current release and CSD level for the OS/2 components installed on your system and to let you change the mouse and wait pointers. These are the bits of fun that all good utilities should have, but they also serve a purpose. On some SVGA and XVGA screens, different mouse pointers are easier to see. MSR supplies a handful of types to select from. The Settings menu lets you view and change PM Patrol configuration items. Here you can set things from startup options to network settings to color schemes.

The PM Patrol Options screen is also where you can select what is displayed on the status line running across the bottom of your screen. You simply select the item you want displayed from the items in the selection box on the left side of the options window. As you select and deselect items, you'll see them appear and disappear on the status line. The selection area on the right side lets you show some of the items, like CPU and RAM, in a bar graph format as well as numerically.

Some of the above mentioned utilities also work from the command line, such as Find File (FF) and Kill OS/2 Process (PID-KILL). Another nice command line utility is one that finds duplicate files (FDUPS). You can compare by name, size and/or last write date.

Conclusions

PM Patrol advertises that it has something for all OS/2 users, from the everyday user to the LAN Administrator. While PM Patrol may be a nice option for the everyday user, I highly recommend it for the power user, programmer and network administrator. For the power user, PM Patrol offers a way to monitor processes and an easy way to terminate them should the need arise. For the programmer, it offers the ability to monitor CPU and memory usage, aiding in optimizing code. While I was unable to test the network specific portions of PM Patrol, those I was able to use would have come in very handy when I was man-

continued on page 67



DOT EXE

Software for OS/2

getting creative with ColorWorks

True Blue—Baby, I Love You

BY GEOFFREY HOLLANDER

dedicated OS/2 users are always on the lookout for applications that go beyond the usual DOS and Windows port-overs (clones in spirit, even if not in code). First won over by OS/2's system capabilities, users now look for that rarest of entities: the "true blue" OS/2 program. This archetype cannot be written for DOS or Windows because it uses OS/2's environmental resources so completely. In short, it's the kind of program for which you would become an OS/2 user, rather than the other way around.

ColorWorks 1.0 is a perfect example. SPG, creator of ColorWorks, defines it as "a powerful 32-bit multitasking and dynamically multithreaded graphics paint and image processing program, designed to vastly expand your artistic creativity." That's a tall order for any program, but ColorWorks pulls it off with style. When in Draw Mode, ColorWorks takes advantage of OS/2's capabilities, enabling you almost always to continue to use ColorWorks. You can do nearly anything to any canvas at any time, such as work with a canvas that is still executing drawing operations on itself. ColorWorks allows this by directing drawing operations to a drawing queue for processing by the program's graphics engine. Because each canvas has its own drawing queue, you can continue drawing, adjust tools or commands, print a canvas—even change a canvas's magnification—while previous drawing options are still processing.

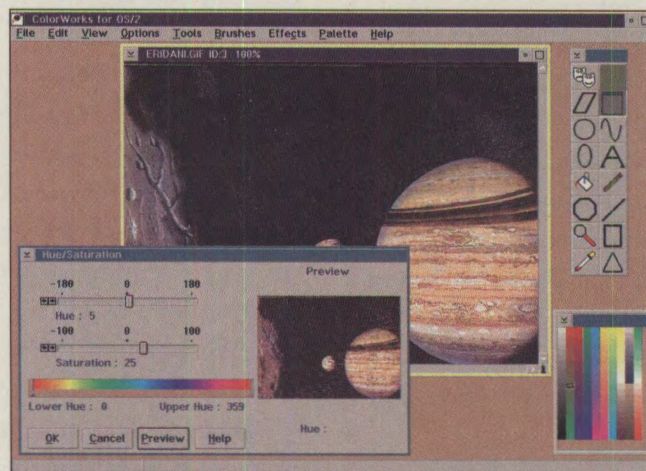
ColorWorks' performance capabilities are further enhanced by its own multithreading architecture, which ensures optimum per-

formance whether you're working on a single or multiple processor machine. The program is not only SMP (Multiple Processor) ready when you are, but also optimized with the ability to route individual drawing operations to your systems' processor configuration for the fastest possible execution. You can even set the maximum number of processors (up to 64) among which you

want drawing tasks to be divided. This can be done dynamically while running the application. All this is augmented by careful consideration and well-executed programming. You can dynamically reconfigure individual canvases to hold up to 255 levels of Undo per canvas. Only the edited images are saved (not whole canvas duplicates), which conserves large amounts of RAM. ColorWorks uses Dynamic In-

Memory Image Compression (DIMIC), an advanced image compression technology which allows you to edit images as compressed data—reducing normally required memory by as much as 90 percent. DIMICs also compress the Undo Buffers, conserving additional RAM resources.

The artist in you will more likely be interested in how SPG makes good on the "expanding artistic creativity" part of its promise. That's accomplished by taking a very different approach to image editing than more commonly known programs, such as Adobe PhotoShop, Micrografx Photo Publisher and PhotoFinish. Like those programs, ColorWorks provides a number of tools, textures, effects and distortions, but that's where the similarity ends. For starters, every tool can be finely configured by the user. These adjustments can be viewed in a preview window as



Using the dialog box, color, hue and saturation can be adjusted and previewed.

they are altered to ensure they will create the desired result. This feature alone makes an enormous variety of effects possible. But ColorWorks further diverges from its more artistically mundane competitors by enabling every tool—filter, brush, texture, pixel displacement, etc.—to be used with every other. Any combination can be saved as a Graphic State and reused on future canvases whenever you wish. In effect you can design your own unique set of custom effects within ColorWorks without having to be a programmer. Hence the number of potential image modifications—and the potential for your creativity—is virtually unlimited.

ColorWorks can be used like a traditional paint program where image data is edited with drawing tools, or like a photo retouching application, where the effects are applied to a selected area of the canvas (i.e., a floated image). The program typically defaults to Draw Mode in which you draw directly on a canvas using the drawing tools. These tools will either apply a color or all currently enabled effects to the canvas, simultaneously. When you run the program in Mask Mode, all drawing tool functions relate directly to a mask definition and do not affect the actual canvas's image information. Mask definitions can easily be saved as Image Masks for creating floated images (a duplicate and separately modifiable copy of the original), Distortion Masks (used to selectively distort floated images) and Protection Masks (also known as shape masks, they protect all defined areas of the image from being overwritten by drawing operations).

ColorWorks comes with several provided effects "engines" that are divided into the following sections:

TOOLS	<i>Masking, Full Canvas, Free Draw, Color Picker, Fill and a variety of shapes.</i>
BRUSH VARIATIONS	<i>Sizes and Shapes.</i>
COLOR LABS	<i>Color Map and Histogram adjustment, Brightness and Contrast, Hue and Saturation, etc.</i>
FILTER LABS	<i>Sharpening Lab, Smoothing Lab, Noise Reduction Lab, Edge Detection Lab, etc.</i>
SPECIAL FILTERS LAB	<i>Emboss (3), Slate (2), Stone, Vibrate (2), Shake (2), Blurry, Pastel (5), Sketch (7), Spectre, Entity, Spirit, Haze, Radio Active, Hot Flash (2), etc.</i>
TEXTURIZE	<i>Brick (3), Block (2), Rough, Stone, Granite, Glass Block, Stucco (2), Water Drops, Wood Parquet (2), Mosaic, Jig Saw Puzzle, Tiles, Weave, etc.</i>

PIXEL DISPLACEMENT *Checkered, Wavy, Camera Lens, Streaked, Spattered, Rippled, Diffused, Fly-eyed, etc.*

PREDEFINED GRAPHIC STATES

Comic Book, Colorized Emboss, Bas Relief, News Print, Saturation Rain, etc.

Most of ColorWorks effects engines can be individually altered in strength, color intensity, depth and degree. A Custom Filter Lab feature helps you create and keep custom filters you have developed and tested by using the Custom Filter dialog box. ColorWorks will work with and/or convert several common image file formats, including: JPEG (.jpg), PC Paint (.pcx), TIFF (.tif), Bitmap (.bmp), Graphic Information File (.gif), Targa (.tga), Encapsulated PostScript (.eps) and PICT (.pct)—making ColorWorks an excellent tool for converting file formats as well as for saving edited images as alternate file formats. The list of features is too long to elaborate on fully here—which in itself tells you something about what a powerful image editing program ColorWorks is.

The reason this landmark program is so important to OS/2 is that it represents a new approach to OS/2 programming. ColorWorks is so powerful and distinctive that it encourages users (e.g. graphic artists) to convert to OS/2 just to be able to use it. Hopefully, we'll see more OS/2 developers like SPG publish "true blue" applications that fully optimize OS/2 technology rather than merely working well within it. The most exciting thing about ColorWorks, however, is its wide open image editing architecture and unconventional approach. To the artist, ColorWorks' limitless possibilities for unique, distinctive and personal image expression will be reason enough to switch. ♦

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Geoffrey Hollander is the principal of MailPouch, a computer service bureau based in Lake Oswego, Oregon, that serves the direct mail marketing industry. He can be reached via CompuServe at 75202,3527.

AT A GLANCE

ColorWorks 1.0

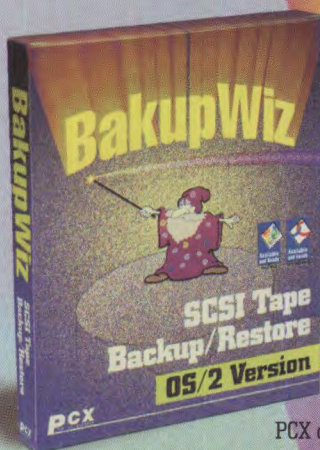
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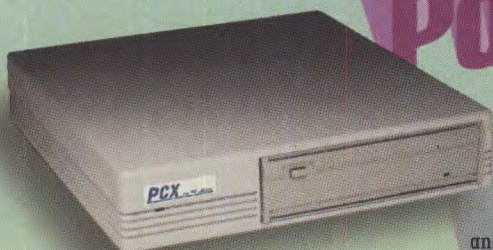
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PCX also markets a complete line of standard SCSI tape backup units ranging in capacity from 250MB to over 10GB. Available in both internal and external models, these units are priced from \$550. For very large backup needs, PCX offers robotic tape loader mechanisms from 48GB to over 1 terabyte.

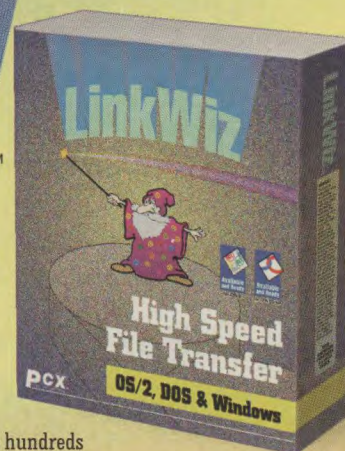
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**NEW from the makers
of SPF/PC**

RhinoCom: Stampeding to the Top



If this PM pachyderm lives up to its potential, it could set the standards for OS/2 communications software.

BY BRUCE BYFIELD

OS/2 software developers seem determined to inflict whimsy on us. First, Relish introduced WorkPlace Shell objects called buns. Now RhinoCom, Rhinetek's new communication program, offers a dialing directory called a Rhinodex and phone listings called Rhinos. Clearly, we've reached the stage of terminal whimsy.

Fortunately, RhinoCom is more than whimsy. After I changed a few icons and its text, RhinoCom's ease of use and configurability made me glad to give it hard drive space. And with some additional features and more help with setup, RhinoCom should find its way onto other systems as well.

Retail modem programs like RhinoCom face tight competition. Most shareware supports X, Y, Z and Kermit transfer protocols and DEC VT and ANSI terminal emulations. True, RhinoCom's additional Data General emulation is unusual, but on the whole its basic functionality is no greater than that of its shareware rivals. In fact, some OS/2 rivals support CompuServe B protocol, which won't be in RhinoCom until its next release.

Traditionally, retail programs compete (and justify higher prices) by offering extra features. RhinoCom is no exception. Except for a lack of built-in virus protection, RhinoCom more than matches HyperACCESS/5 (not to be confused with the HyperACCESS Lite bundled with Warp) and PMComm, which until now have been the premier OS/2 modem programs.

But what really gives RhinoCom an edge over HyperACCESS/5 is its OS/2-oriented design. For one thing, it doesn't give space to redundant features like its own text editor. More importantly, while both programs download well in the background, on my system RhinoCom is the more stable multitasker. Rhinetek even

claims that its program can handle two modems simultaneously, although I was unable to test this feature.

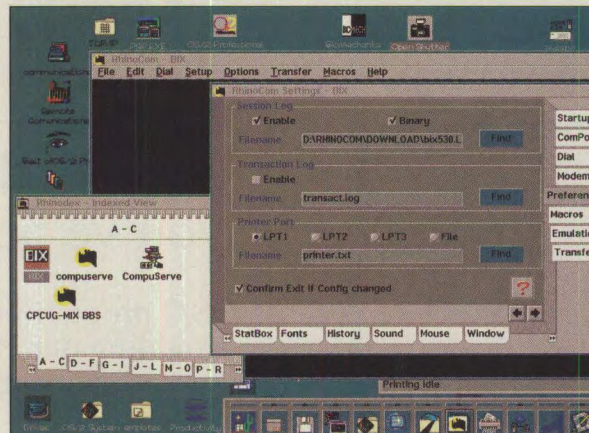
Moreover like PMComm, RhinoCom behaves like a Presentation Manager product rather than like the text-based (for now) HyperACCESS/5. This difference is especially obvious in RhinoCom's departure from the traditional single window. Although too many windows can reduce the desktop to a clutter, as sometimes happens with the IBM Internet Connection for

OS/2, RhinoCom departs from the PMComm mode (and improves upon the Internet Connection) through its moderate use of windows—organizing communications in a way that a single window never can.

RhinoCom starts with the Rhinodex. In the default detail view, this dialing directory resembles a notebook with alphabetical tabs. Given that the first thing most users do when starting a modem program is to add or dial a listing, this seems a reasonable

starting place. Yet RhinoCom goes further.

Like many modem programs, RhinoCom offers single or multiple dialings. But it also offers further options that allow several hours of modeming to be planned in a dozen mouse clicks. For example, if one Rhinodex is nested in another, selecting it will dial all the Rhinos in it. The dialing order can be changed by giving each Rhino a priority. Then, in a pop-up menu, users can choose whether to dial each selection or to stop dialing as soon as one is connected. When a bug is corrected, users will also be able to choose multiple redials from the Rhinodex instead of the session window. My reaction to this organizational ability is like my reaction to OS/2's multitasking: when I didn't have it, I didn't miss it, but now I wouldn't be without it.



A highly configurable settings notebook and a customizable phonebook contribute to RhinoCom's ease of use.

DOT EXE

For each Rhino dialed, a separate session window opens. Here, users can configure each Rhino exactly as they like. Features can be accessed from pull-down menus, the setup notebook or—in some cases—the buttons on the statbox, while macros can be assigned keys or added to the pull-down menu. Such features as colors, commas, fonts and warning levels can all be changed, even while connected. If necessary, the detailed behavior of emulations and protocols can be changed—a level of control rarely required nowadays, although welcome for troubleshooting. A Transaction Log and a color-coded Line Monitor provide additional help.

Some of RhinoCom's features might seem redundant to individual users. For those who like to reply to messages off-line, the Session Log can be toggled. Those who prefer to reply on-line can use the History Buffer and/or the OS/2 clipboard. Text in the session window can be selected with the mouse and sent to the clipboard, posted, or pasted in a reply, each with one or two clicks of the mouse. These features also can be tuned to individual preference.

This ease of use is impressive in a new program. However, RhinoCom would be even easier to use with a few improvements.

For now, users should know that although RhinoCom is a Presentation Manager program, it is not SOM-integrated. Delete or move a file, and RhinoCom is unaware of that fact. In other words, if users try to organize all the Rhino settings into their own directory, each icon will have to be changed manually.

Another inconvenience is that RhinoCom does not support automatic scripting. It does include sample REXX scripts and the manual contains an appendix of commands. All the same, novices will need patience to compile original scripts. As a result, many users are largely barred from using logon scripts or making full use of the Host mode. For most of us, the alternative is macros, which, unlike scripts, can be compiled automatically. If delays are placed between commands, macros can even substitute for scripts. Yet such macros are still less flexible than scripts.

RhinoCom's greatest drawback, however, is that it takes time to configure. Short of editing the file, the default Rhino settings cannot be changed. Nor can macros be shared between Rhinos.

To make matters worse, the manual is minimal. Lacking screen shots and laid out to save space, it is difficult to use. Its cross-references lack page numbers. It also omits such information as the

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DOT EXE

fact that its ANSI emulation supports TTY, or that its VT-320 supports VT-220. Many users, too, would probably appreciate setup tips and a larger troubleshooting section. For example, users new to OS/2 might appreciate being told about the convenience of placing shadows of a text editor, compression programs and virus protection in the RhinoCom folder.

Fortunately, these shortcomings are being corrected. According to Kristin McCown in RhinoCom marketing, SOM-integration and automatic scripting will be in RhinoCom's next release later this year.

Help is also improving. Already, RhinoCom's coach function walks users through basic procedures, while its installation program so carefully tells what will and will not happen that it should be required study for all programmers. Also, free technical support and version 1.1's addition of a search function in its on-line help suggests Rhinetek is more aware of its customers' needs.

A few users may always have problems with RhinoCom, simply because learning all of its features takes time. For this reason, Rhinetek is considering a "lite" version for the home market. This move seems unnecessary, however. With the popularity of Works

packages, the distinction between the office and home markets has almost disappeared.

Besides, OS/2 users have always had high standards in software. If RhinoCom lives up to its potential, it will not just meet those standards, but set them. ♦

Bruce Byfield is an instructor in English at Simon Fraser University in Burnaby, BC, Canada. He can be reached at byfield@monashee.sfu.ca.

AT A GLANCE

RhinoCom

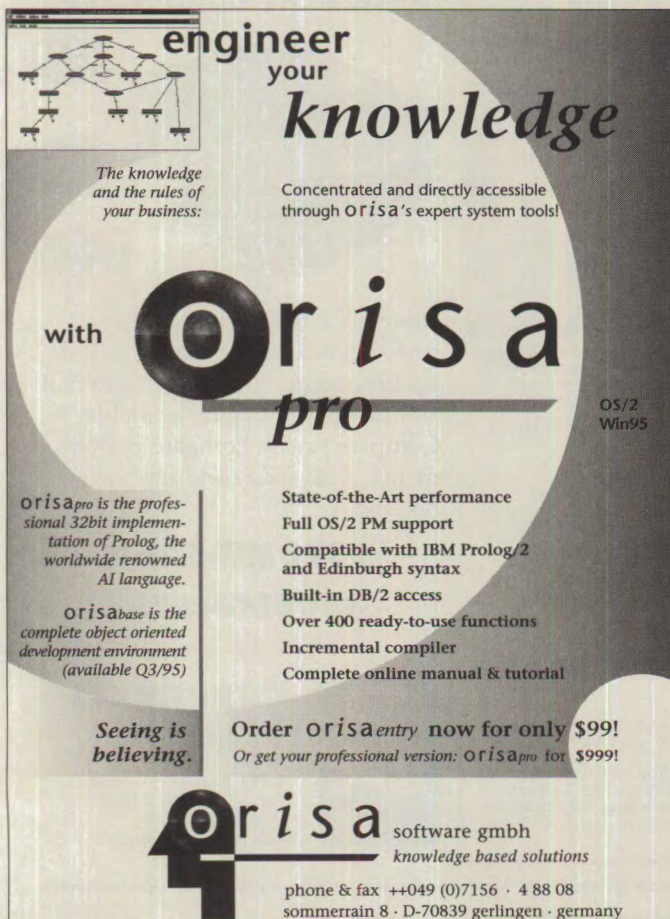
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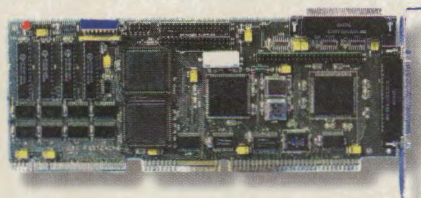
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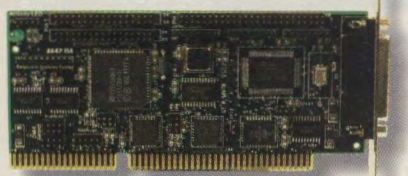
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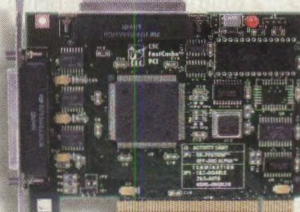
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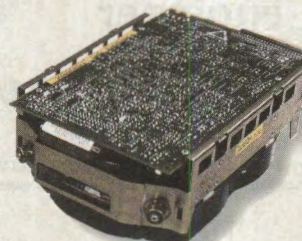
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SCOOPS

Wish Upon a Star

Thanks to a melodic exchange between Gepetto and Pinocchio, everyone knows that who you are makes no difference to the star you wish upon. Indeed when Stardock Systems developed its soon to be released Object Desktop the company addressed the wish lists of OS/2 users of all levels as well as those of a few Win95 advocates. "Our joke around here is that Object Desktop is going to be a Win95 killer," says Brad Wardell, president of Stardock Systems.

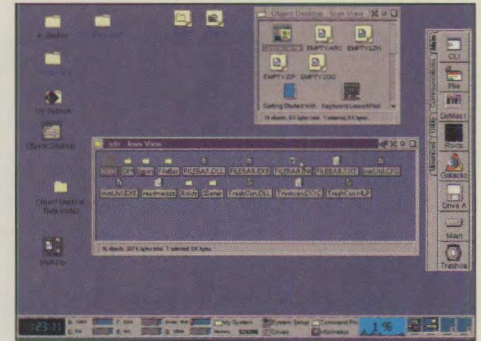
"We've been looking at the wish lists that IBM has been

ignoring. We also listened to the Win95 advocates who say that the reason it is better than Warp is because Warp is missing x or y. So we set out to develop a tool that will give Warp x, y and then some," says Wardell. Set to ship sometime in August, Object Desktop will enhance the look and feel of OS/2 and add multiple features to the operating system, says Wardell.

The product will include such expected utilities as disk space and memory monitors and features for the corporate market. It will also include

a slew of cosmetic enhancements, says Wardell. "As soon as you install Object Desktop, the way you look at OS/2 is completely changed: the scroll bars look different, we've changed the Ctrl-Esc task list to show icons instead of just a list of titles and we've changed the way the Launch-Pad looks and are making it possible to minimize applications to it," says Wardell.

At press time, Object Desk-



Due out in August, Stardock System's Object Desktop gives OS/2 a functional facelift.

top was just entering beta testing. Following the product's August release, the company will begin shipping three other applications geared toward the education and game markets.

New Products



Open Connect System's new release offers emulation solutions for interoperability between IBM mainframe and midrange host systems and TCP/IP based terminals.

Open Sesame

Open Connect Systems, Inc., has released OC/TN3270 Client and OC/TN5250 Client mainframe and midrange system access support for Windows NT and OS/2 Warp 32-bit operating

environments.

This step broadens the company's suite of emulation solutions for interoperability between IBM mainframe and midrange host systems and

TCP/IP-based terminals.

Features such as file transfer, bidirectional enterprise printing, program-to-program interfaces and host interoperability and connectivity solutions are available when accessing SNA-based hosts.

For pricing, contact Open Connect Systems, Inc., 2711 LBJ Freeway, Suite 800, Dallas, TX 75234. (214) 484-5200, fax (214) 484-6100. Internet: cathyk@oc.com.

Safetychute

A new Back-UPS Pro Workstation Software Bundle from American Power Conversion combines APC's PowerChute Pro software with Back-UPS models 280, 420 and 650 for UPS monitoring and unattended, scheduled or delayed system shutdown and testing.

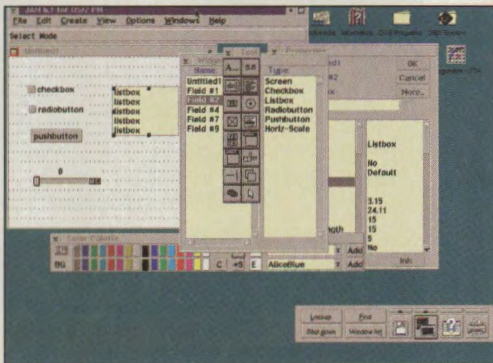
Equipped with battery backup power and surge pro-

tection, the new Pro models are designed for multitasking systems such as OS/2, Windows NT, peer-to-peer stations, engineering stations and other advanced networking standalone systems. The PowerChute Pro software is installed on the system, which is then connected to a Back-UPS Pro via a serial communications cable. A microprocessor-controlled battery management system monitors battery performance, life and reliability.

Estimated prices for Back-UPS Pro 280, 420 and 650 Workstation Bundles are \$199, \$299 and \$399 respectively.

MARKETLINE

American Power Conversion, PO Box 278, 132 Fairgrounds Road, West Kingston, RI 02892. (800) 800-4APC (4272), fax (401) 789-3710.



First demonstrated at San Francisco's DB Expo, JYACC's OS/2 version of JAM is an application manager with two database drivers; one is user-selected.

JAM on it

JYACC, Inc., now has available an OS/2 version of JAM, its application manager first demonstrated at San Francisco's recent DB-Expo. Applications developed with JAM for OS/2 can be used on OS/2 versions 2x and Warp. The package costs \$2,000 and includes a database driver for the company's built-in prototyping database, a second, user-selected database driver and complete JAM documentation and development environment.

JYACC, Inc., 116 John Street, New York, NY 10038. (212) 267-7722, fax (212) 608-6753, E-mail: jazzin@jyacc.com.

User Insight

Insight for DB2 Version 4.2 and DB-Delivery for DB2 Version 3.4, recently released by Legent Corp., were devel-

oped through much customer feedback. Insight for DB2's features include expanded user control over Insight reports, expanded virtual

storage use, reduced CPU usage and "shadow" catalogs. Both products aim to provide users with greater flexibility and DB2 monitoring control.

Depending on CPU class and size, Insight for

DB2 v. 4.2 ranges in price from \$14,000 - \$80,000; DB-Delivery for DB-2 v. 3.4, \$18,000 - \$94,000.

Legent Corporation, 575 Herndon Parkway, Herndon, VA 22070-5226. (800) 676-

5468 or (703) 708-3726.

Internet: URL

http://www.legent.com.

Better bug buster

With its new releases of VirusScan 2.2 for OS/2, DOS and Windows and NetShield 2.2 for NetWare, McAfee has sought to improve scanning, integration between applications, virus protection and overall usability. Features include Novell Netware 4.1 support, enhanced notification options, a new Windows console and administrator access controls. The products share a common virus scanning library and engine, aiding network managers to employ a single set of monthly updated files. NetShield 2.2 two-year subscription fee pricing begins at \$18 per node for a 25-node network. Virus Scan 2.2 pricing begins at \$65 for single users.

McAfee, Network Security

and Management, 2710 Walsh Avenue, Santa Clara, CA 95051-0963. (800) 552-9876, fax (800) 970-9727.

SQL togetherness

Watcom International Corporation, a database vendor and subsidiary of Powersoft Corporation and Sybase, Inc., has packaged together multiplatform editions of the Watcom SQL product line: versions for OS/2, NetWare (NLM), Windows 3.1 and Windows NT. The company also plans to include a version for WIN95.

Watcom SQL was designed with a small disk and memory footprint and a self-tuning query optimizer for the desktop PC and LAN server environments. Developed for database stations with little administrative support, Watcom SQL also supports mobile and workgroup applications. It is available in

Smart test

AutoTester Inc., has introduced two new testing applications—AutoTester 3.0 for OS/2 or Windows and the Distributed Test Facility (DTF) 1.0, which tests Windows and OS/2-PM client/server applications across multiple network machines.

AutoTester 3.0 lets users generate tests that can be saved and reused. It also provides a command set for full scripting needs. Tests can be edited online with the application and then executed from any point in the test. They can also be

edited off-line without the application and they adjust automatically during playback to accommodate any changes in application icons, objects or controls. Pricing for both items

is based on purchase volume.

AutoTester, 8150 N. Central Expressway, Suite 1300, Dallas, TX 75206 (800) 328-1196 or (214) 368-1196, fax (214) 750-9668.

Line	RunName	Run#	Command	Status	StatusDetail
12	TEST1	3	Clicked "U.S. Citizen" wait 5	Passed	The check box is checked.
13	TEST1	3	If No		
14	TEST1	3	Clicked "Single" wait 5	Passed	The radio button is on.
15	TEST1	3	If No		
16	TEST1	3	Look text "Marketing" in "Department"	Failed	The Text value "Marketing" was not found in the window "Department"
17	TEST1	3	If No		
18	TEST1	3	>Log SCURLLOG "Verify list box text"		
19	TEST1	3	>Assign TESTCASESTATUS = "Failed"		Assign variable "TESTCASESTATUS" with value "Failed".
20	TEST1	3	Look image PAY_BITMAP with "Add New"	Failed	The Bitmap value "PAY_BITMAP" was not found in the window "Add New"
21	TEST1	3	If No		
22	TEST1	3	>Log SCURLLOG "Verify bitmap on 'Add"		
23	TEST1	3	>Assign TESTCASESTATUS = "Failed"		Assign variable "TESTCASESTATUS" with value "Failed".
24	TEST1	3	Stop		

With AutoTester 3.0 Network administrators can generate and save tests for evaluating client/server apps across multiple network machines.

MARKETLINE

standalone (Watcom SQL 4.0) and concurrent (Watcom SQL Server 4.0) user configurations.

For pricing, contact Watcom International, 415 Phillips Street, Waterloo, Ontario, Canada, N2L3X2 (800) 265-4555 or (519) 886-3700.

Matrix madness

CodeSmith Software has released Matrix, a new OS/2 PM strategy shareware game. The game is billed as easy to learn, like Tetris, and equally addicting to play. Players attempt to score by matching colored tiles against the computer or another person. The game is fully configurable, including board size and choice of background. Players also can choose the shape and color of the playing tiles. System requirements are OS/2 2.0 or later, 220K of free disk space and 16 MHz 386 or better. Registration costs \$12 (U.S.). The game is available at most OS/2 FTP and BBS (look for MATRIX11.ZIP) sites, as well as on CompuServe and AOL. Inquiries can be sent via email to mshill@direct.ca or mailed to Vancouver, BC, Canada, V6R 1G0.

A fun find

Open Data Corporation's FindOut! 2.0 software has been designed to give users access to corporate databases. Featuring what the company calls an intuitive interface, FindOut! 2.0 lets users search relational databases using common business terms. The

software also aims to make the lives of information system managers easier by automating the set up and maintenance process. FindOut! Builder sets up the enduser query environment, including a term dictionary, reports and menus. FindOut! 2.0 runs on Windows and OS/2 and is optimized for distributed, client/server environments—at the department or enterprise level—with access to multiple relational database management systems and data warehouses.

FindOut! is \$595; FindOut! Builder is \$2,995. Open Data Corporation, 95 Hayden Avenue, Lexington, MA 02173-7967. (617) 860-8300, fax (617) 860-8399.

DB2 direct

Application developers have two new options from XVT Software for building high-performance client/server applications that can directly access DB2: Shadow Direct and XVT DBAware Client Tools. The tools can access DB2 from any popular GUI client and can connect easily to other popular databases such as Oracle, Sybase and SQL Server. Designed to make XVT's Development Solution for C (DSC) more appealing, they also provide the first client-to-mainframe direct pathway to DB2 rather than using gateways, transaction managers (such as CICS) or database replication. Shadow Direct's mainframe software is priced per MVS Host starting at \$15,000. DBAware is licensed on a

developer-seat basis for \$4,500 on personal computers and \$9,850 on workstations. XVT Software Inc., 4900 Pearl East Circle, Boulder, CO 80301. (303) 443-4223, fax (303) 443-0969. Internet: info@xvt.com. World Wide Web: <http://www.xvt.com/xvt>.

Double-up

Pegasus 32-bit based file and volume management software for optical drives and jukebox libraries has been packaged with Lotus

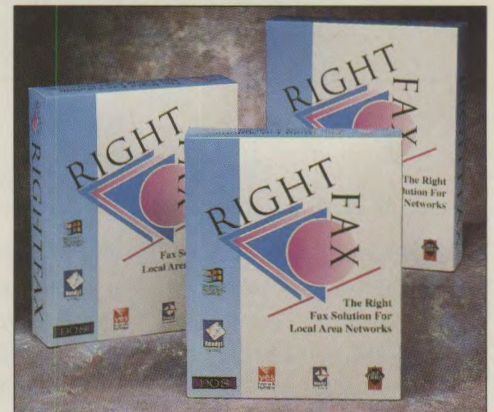
Notes:Document Imaging Mass Storage System. The bundling agreement between Pegasus Disk Technologies and Lotus Development Corp., gives Notes customers the choice of using any popular brand of optical drive or jukebox transparently. Lotus also will include imaging capabilities—the Image Viewer and Print-to-Fax Driver—with Lotus Notes and Lotus cc:Mail.

Pricing is available from Pegasus Disk Technologies, Inc., 1600 South Main Plaza, Suite 110, Walnut Creek, CA, 94569. (510) 938-5340, fax (510) 938-5341. Internet: marketing@pegasus.tpw.com.

Fax forever

RightFAX's latest addition to its high-end network fax serv-

er products is RightFAX 4.0, which supports OS/2, DOS, Windows and NT platforms and the following network operating systems: Novell NetWare 2.15c or later; NetWare 3.1x; Netware 4.x; IBM LAN Server 3.0 and 4.0 and Microsoft Windows NT Server (NTS). On NetWare, the fax server is a dedicated workstation. On LAN Server and NTS the software can run on an existing file server or a dedicated machine. The stan-



RightFAX 4.0 boasts 59 features, including a built in text editor and a fax scheduler.

dard user interface, FaxUtil, also features a character-oriented window for OS/2 users for faster remote communications. But no matter what platform users choose, they will be connected to a single database, so that faxes, users and published phone books are available from all systems. RightFAX 4.0 lists 59 features, including a built-in text editor that allows users to fax a short note, up to 21 lines, using just that feature. Users can prioritize their outgoing faxes, setting them to go out months or even years ahead,

MARKETLINE

and combine pages from sent or received faxes to make a new document. Faxes can be automatically archived, deleted or routed. And of course, all faxes can be sent and edited from, and received by, the desktop.

For pricing, call RightFAX, 4400 East Broadway Boulevard, #312, Tucson, AZ 85711. (602) 327-1357, fax (602) 321-7456.

Night Cap

CapWatch 1.0 is now available from Creative Assistance Software as an addition to its line

of OS/2 LAN Server utilities.

CapWatch provides the user real-time graphing of the utilization, data logging, graph capture and re-display and configurable alert and alarm levels. The software can be operated remotely across the LAN from any OS/2 workstation or locally on the server being monitored without generating network traffic. CapWatch monitors connections, file locks, opens, sessions and shares.

The software retails for \$129. Additional licenses cost \$104.

Creative Assistance Software, 9431 Kings Falls Drive, Charlotte, North Carolina 28210. (704) 544-0001, fax (704) 543-6366.

Mail mania

InnoVal Systems has released two versions of Post Road Mailer, its new E-mail program for IBM's OS/2 PC operating system.

Its Green Edition is offered for Internet uses and Innoval's Blue Edition is available for IBM OV/VM PROFS users.

Post Road Mailer features drag and drop filing, multiple

address book with nickname and group name support, mail folder sorting and subject threads, inbound message filtering and MIME compliant file attachments.

The Green Edition for Internet Mail is priced at \$59; the Blue Edition for PROFS, \$79.

InnoVal Systems Solutions, Inc., 600 Mamaroneck Avenue, Harrison, New York 10528. (914) 835-3838, fax (914) 835-3857, E-mail: innoval@ibm.net.

News

Shareware source

It's OK to admit it. We all do it. Whether it's a hunt for a hip new bitmap or a helpful REXX program, we neglect our jobs and loved ones as we lunge from BBS to FTP site, foraging for the latest and greatest in shareware savories. But for those Virtual Victorians who can't justify spending a half hour of online time just to track down and retrieve a program that randomizes the colors and bitmaps on their desktops, Arawak CD Solutions has the answer. The company has released its first OS/2 Shareware CD, with a second to follow in late August. For \$15.00 US (\$19.95 Canadian) you get 3,000 of the latest shareware programs, ranging from fonts to fractals.

The disk includes a "brows-

er" application that allows the user to search the CD for a specific file. The browser also prompts the user for a destination directory and automatically uncompresses the file onto the user's hard drive. "A lot of people think they have access to everything because they are on the Internet. But the net isn't as easy to navigate as a CD. That's why we're offering the Shareware CD," says Sean Mitchell, president of Arawak CD Solutions. The company expects the disk to be available through retail channels in the U.S. by August.

Hilgraeve developments

Hilgraeve Inc. is currently developing 32-bit, graphical interface versions of its HyperACCESS/5 communications program and KopyKat

remote control software. The programs will be developed for both the Intel and PowerPC platforms.

The new communications program has been dubbed HyperACCESS for OS/2 and is due out later this summer. "The product will be popular with endusers because it has a lot of graphical pizzazz and it's easy to use," says Matt Gray, president of Hilgraeve.

KopyKat and the PowerPC versions of both applications will follow the release of HyperACCESS for OS/2. At press time pricing was not available.

API extensions

A core group of 750 Windows API extensions will be released on IBM's DEV-CON8 CD later this summer. The Developer API Extension

sions will supply about 80 percent of the extensions required to port 32 bit Windows applications to OS/2.

Using the API extensions in conjunction with such development tools as OneUp's SMART (Source Migration Analysis Reporting Toolset), companies will be able to develop for both platforms simultaneously, says John Crowe, PSP communications specialist. "The release of the Developer API Extensions is basically IBM saying 'We are looking out for the developers,'" says Crowe.

"There will be little things that an application will not be able to take advantage of if it is ported over, but for the most part you don't lose anything when you develop using the core API," Crowe told *OS/2 Professional*. ♦

Hot on the Trail with a Bloodhound Called REXX

BY ROBERT MAHONEY

As *OS/2 Professional* discovered last year, Bloodhound (or in IBM's uninspiring nomenclature, Search Manager/2) is a powerful text indexing and retrieval tool. However, as a version 1.0 product it has a number of very annoying quirks. One of the quirks that bothers me most is the inability to easily queue directories or even select file masks to index. While reading through the Bloodhound documents I discovered a (partial) solution to the dilemma. Bloodhound includes callable APIs—one of which allows you to schedule a document. As a REXX maven I figured that I could simply use a REXX program that calls **SysFileTree** and schedule the files that I wanted. But, inexplicably, the APIs do not have a REXX interface! So I set out to build my own REXX wrappers around the Bloodhound APIs and pass the technology along to you.

Bloodhound provides the APIs listed in the table below. I added REXX support to those listed in bold type. I chose not to add REXX support for all of the APIs because, at the time, I just wanted to schedule documents to be indexed. In the future I will be adding more and more Bloodhound APIs to the REXX DLL, so if you would like to keep up with the latest releases of REXXSM2 (including source!) just occasionally check my home page (<http://www.netusa.net/~rmahoney/>).

Bloodhound APIs

EhwListServers	lists all the Bloodhound servers available to your workstation
EhwStartSession	starts a Bloodhound session with one of the above servers
EhwListIndexes	lists the indexes available on one of the above servers
EhwOpenIndex	opens an index on one of the above servers
EhwGetIndexInfo	retrieves information on an index

LISTING 1

EXAMPLE OF A DATASTREAM CALL

```

ulDataLength = SIZEOF_DATA_AREA;
pDataStream = pArea;
usFilenameLen = strlen(szFilename);
/* WriteDataItem formats the datastream */
WriteDataItem (ID_ADD, IT_ATOMIC,
               usFilenameLen,
               (PCHAR)szFilename,
               &ulDataLength,
               &pDataStream);

ulDataLength = (ULONG )(pDataStream - pArea);
pDataStream = pArea;
ulReturnCode = EhwScheduleDocument(pSession,
                                   ulIndexHandle,
                                   ulDataLength,
                                   pDataStream,
                                   &ulDiagnosisInfo);

INT WriteDataItem (
    USHORT usItemId,      /* In-item identifier */
    UCHAR  ItemType,      /* In-item type */
    USHORT usValueLength, /* In-length of item
                           value */
    PCHAR  pValue,        /* In-ptr to item
                           value */
    PULONG pulAreaLength, /* In/Out-remaining area
                           size */
    PPCHAR ppArea         /* In/Out ptr to target
                           area */
)
{
    USHORT usItemLL; /* total length of data item */
    PITEM  pItem;    /* pointer to data stream
                     item */

    pItem = (PITEM )*ppArea; /* set pointer to

```


CODE CACHE

```

                                target area
                                calculate total
                                item length */

usItemLL=Offsetof(ITEM, value[0])+usValueLength;
                                /* check remaining
                                area length */

/* write item ll/id/it to area */
if ((ULONG )usItemLL > *pulAreaLength)
    return (RC_FALSE);

pItem->ll = VAL2(&usItemLL); /* inversion to
                                big-endian */
pItem->id = VAL2(&usItemId); /* format using
                                macro VAL2()*/
pItem->it = ItemType;
                                /* if provided, write */
if (usValueLength) /* item value to target
                                area */
    memcpy(pItem->value, pValue,
            (size_t)usValueLength);

*ppArea += usItemLL; /* update current
                                area pointer */
*pulAreaLength -= usItemLL; /* update remaining
                                area len. */

return (RC_TRUE);

} /* end of WriteDataItem() */

```

LISTING 2

THE STRUCTURE OF A SHARED VARIABLE REQUEST BLOCK (SHVBLOCK)

```

typedef struct _SHVBLOCK {      /* shvb      */
    struct _SHVBLOCK *shvnext; /* pointer to the
                                next block */
    RXSTRING      shvname; /* Pointer to the
                                name buffer */
    RXSTRING      shvvalue; /* Pointer to the
                                value buffer */
    ULONG         shvnamelen; /* Length of the
                                name value */

```

EhwSearch	specifies a query to an index
EhwListResult	lists the documents that match a search criteria
EhwBrowseDocument	invokes the Bloodhound browser to display a document found with a search request
EhwDeleteResult	deletes the results of a search
EhwScheduleDocument	schedules a document to be indexed
EhwUpdateIndex	starts the index updating process
EhwReorgIndex	reorganizes the index
EhwCloseIndex	closes an open index
EhwEndSession	ends a Bloodhound session

Anatomy of a Bloodhound API

Bloodhound is a multiplatform tool, so the API was designed to be platform independent. There are two types of inputs—simple and datastream—and both types have specific rules the programmer must follow.

Single Inputs

These are single values of a basic data type such as pointers, integers and characters. For simple parameters, numbers and characters are passed in the standard local representation. With OS/2 this means *little-endian* and we don't have to worry about any conversion.

An example of a simple input is the Update Index call:

```

ulReturnCode = EhwUpdateIndex(pSession,
ulIndexHandle, &ulDiagnosisInfo);

```

A datastream can be information of varying length and content. The length is passed to the API in a different parameter. A datastream structure looks like:

```

struct Data_Item {
    unsigned short ll;
    unsigned short id;
    unsigned char it;
    char value[1];
};

```

where **ll** designates the total length of the item in *big-endian* format, **id** acts as an item identifier (common identifiers are defined in the header files), **it** identifies the type of datastream item (atomic, start or end) and

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```
ULONG          shvvaluelen; /* Length of the
                           fetch value*/
UCHAR          shvcode;     /* Function code
                           for this
                           block */
UCHAR          shvret;      /* Individual
                           Return Code
                           Flags*/
} SHVBLOCK;
```

LISTING 3

SETTING THE SHVBLOCK STRUCTURE

```
SHVBLOCK shvb;
SHORT    retc;
CHAR     szTempStemName[50]

/* remember, at this point pszStemName contains
   STEMNAME. So append the next number in
   sequence to create:
```

value contains the data passed with the item (for atomic types only). Start and end items are used to delimit related datastream items while atomic items contain the actual information pieces.

The data part of the datastream includes five types of character data and numeric data passed in big-endian format. The latter is very important for OS/2 programmers to note, as the Intel architecture is little-endian. Fortunately, the Bloodhound headers contain macros to handle this conversion for us. The five character data types include *Bloodhound names* (a limited character set consisting of uppercase A-Z and 0-9), *external names* (such as document names passed using the local system code page), *document and document group identifiers* (handled as bitstreams), *document text* (the content of the document to be indexed), and *search terms*.

The headers contain defines for the document and document group identifiers: ID_DID for documents, and ID_DGID for document groups. The document text and search terms are always associated with a coded

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character set (see your Bloodhound documentation for valid CCSIDs) and a language. Listing 1 illustrates a datastream call. Fortunately Bloodhound comes with examples which include function calls that handle the hard stuff. We just have to fill in the parameters.

External REXX functions

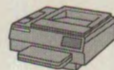
To create an external REXX function you must follow some special rules. All REXX external functions look the same. They all have a prototype of:

```
ULONG AnExternalFunction(CHAR *funcname,  
                           ULONG numargs,  
                           RXSTRING args[],  
                           CHAR *queueName,  
                           RXSTRING *retstr)
```

where **funcname** is the name of the called external function. The external functions need to be registered before they can be called, either explicitly as in call **RxFuncAdd** 'RxSM2ListServers', 'REXXSM2', 'RxSM2ListServers' or by having a function in your DLL that reg-

```
STEMNAME.1, STEMNAME.2,STEMNAME.3, etc */  
  
strcpy( szTempStemName,pszStemName);  
sprintf(szTempName, "%s%d", pszStemName, iNumber);  
shvb.shvnext = NULL;  
  
/* shvname is a RXSTRING - we can set the fields  
   manually or use the BUILDRXSTRING macro;  
   here we are setting the fields manually */  
  
shvb.shvname.strptr = szTempStemName;  
shvb.shvname.strlength =  
    (ULONG)strlen (szTempStemName);  
shvb.shvnamelen = shvb.shvname.strlength;  
shvb.shvvalue.strptr = pStemValue;  
shvb.shvvalue.strlength = ulStemValueLen;  
shvb.shvvaluelen = ulStemValueLen;  
shvb.shvcode = RXSHV_SYSET;  
shvb.shvret = RXSHV_OK;  
if (RexxVariablePool(&shvb) == RXSHV_BADN)
```

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LISTING 4

SETTING THE COUNT OF STEM VARIABLES

```

/* set the STEMNAME.0 variable with the total count of
stem variables */
strcpy( szTempStemName, pszStemName);
sprintf(szTempStemName, "%s%d" pszStemName, 0);
/* convert the number of stem values to a string */
itoa (iNumberOfValues, pValue, 10);
shvb.shvnext = NULL;
shvb.shvname.strptr = szTempStemName;
shvb.shvname.strlength = (ULONG) strlen
(szTempStemName);
shvb.shvnamelen = shvb.shvname.strlength;
shvb.shvvalue.strptr = pStemValue;
shvb.shvvalue.strlength = ulStemValueLen;
shvb.shvvaluelen = ulStemValueLen;
shvb.shvcode = RXSHV_SYSET;
shvb.shvret = RXSHV_OK;
if (RexxVariablePool(&shvb) == RXSHV_BADN)

```

isters all of the functions: call **RxFuncAdd** 'Load-RxSM2Funcs', 'REXXSM2', 'LoadRxSM2Funcs'. Of course, an external function could be registered under different names that point to the same entry point in the DLL—querying the name is the way to find out what was called.

The **numargs** parameter designates the number of arguments passed to the external function and **args** contains the array of argument strings in RXSTRING format. To pass along the name of the currently defined REXX external data queue, use the **queueName** parameter. The final item in the call, **retstr**, is a pointer to a RXSTRING structure that gets returned to the REXX program.

You must worry about two return values in a REXX external function. First, the value you return to the REXX interpreter (**retstr**) and second, the value returned to the command interpreter (the return from the 'C' function). Anything other than a 0 return to the command interpreter from an external function will trig-

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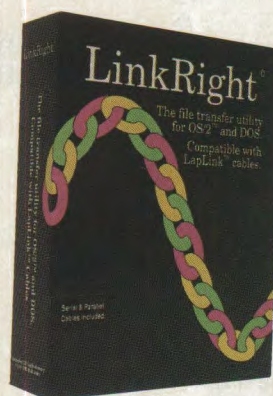
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ger an error in the REXX program. The RXSTRING structure is a way to pass "C" strings to REXX and back. The null terminator of a C string is x"00" which is a valid character for a REXX string. So the length of a REXX string must be encoded along with the pointer to the string.

A RXSTRING structure is defined as:

```
typedef struct _RXSTRING {
    ULONG strlength;
    PCH strptr;
} RXSTRING;
```

There are a number of macros defined in REXXSAA.H to manipulate RXSTRINGs, so the first thing we do is check the number of arguments passed to the function:

```
#define INVALID_ROUTINE 40
#define VALID_ROUTINE 0
```

```
/* macro to fill the RXSTRING structure */
#define BUILD RXSTRING(t, s) { \
    strcpy((t)->strptr, (s)); \
    (t)->strlength = strlen((s)); }
```

This function expects two arguments. If it doesn't get them, an error is raised.

```
if ((numargs != 0 && numargs != 2))
    return INVALID_ROUTINE;
```

You can also test whether the string is valid with `if (!RXVALIDSTRING(args[0]) || !RXVALIDSTRING(args[1]))` and extract the arguments through `pszServerName = args[0].strptr;`

After writing the body of the function to run your desired tasks, prepare REXX for the return:

```
/* start the bloodhound session */
rc = SM2StartSession(pszServerName);

_itoa(rc, buffer, 10);
BUILD RXSTRING(retstr, buffer);
```

REXX provides 256 bytes for the return string. If you need more, do not use `malloc`. Instead, use `DosAllocMem` and REXX will free it. Finally, return from the function with `return VALID_ROUTINE`.

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




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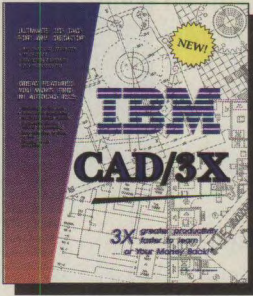
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



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Stems

You may ask, "I see that the List servers function can return more than one server, so how do I return multiple strings?" The answer is to use stems. Dealing with stems can be an article in itself so I will just cover the basics here. Stems can be thought of as arrays. But the neat thing about them is that they can be accessed either by numbers or names. **MYSTEM.1=100** is as valid as **MYS-TEM.OS2PRO=100**. But REXX-C programming conventions dictate that the stems be numbered, with the 0-labeled stem set to the total count of values in the stem. Thus, if you have a stem called **OS2PRO**, with **OS2PRO.1=99** and **OS2PRO.2=100**, then **OS2PRO.0=2**.

An external function that requires a stem is called as **rc = RxSM2ListServers('ServerStem')** using a fragment like the following to access the stem data:

```
/* display the available Bloodhound servers */
DO I=1 to ServerStem.0
  ServerName=ServerStem.I
  SAY "Server number " I " is " ServerName
END.
```

A very common error is passing the stem itself rather than the name of the stem:

```
rc = RxSM2ListServers(ServerStem)
/* notice without quotes! - will not work! */
```

To access a stem in a C program, you must pass the *name* of the variable, not the stem itself to the C function and modify it using the **RexxVariablePool** API and the structure from Listing 2. An example of how to set the SHVBLOCK structure and call the **RexxVariablePool** API appears in Listing 3. You must set up the SHVBLOCK and call **RexxVariablePool** for each stem value you want to set. After setting all stem values you must set the count of stem variables in the STEMNAME.0 variable as illustrated in Listing 4.

With the stem filled out, we can return to the REXX routine and access the values. There are many other operations available through the **RexxVariablePool** API. We have merely examined one, **RXSHV_SYSET**, which sets a new value to a REXX procedure variable.



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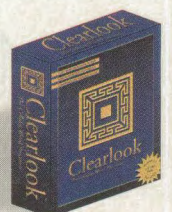
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Wish list

While the Bloodhound developers worked a stroke of genius by providing others with an API, the glass remains half full. I would encourage the developers to add the following APIs so a third party could write a killer front end to Bloodhound: **ListQueueDocuments** to list the documents currently in the queue, **QueryIndexStatus** for querying the status of the indexing process, and **QueryCurrentDocument** to return the name of the document being indexed. Also on my wish list is a PM scheduler/browser program built by an enterprising programmer using VXRexx or VisPro REXX. As IBM has clearly recognized with its WorkGroup offerings built around Bloodhound, this flexible interface has plenty of trails left to blaze. ♦

Robert Mahoney is an OS/2 consultant and the author of Spell-Guard, the spell checker for all apps.



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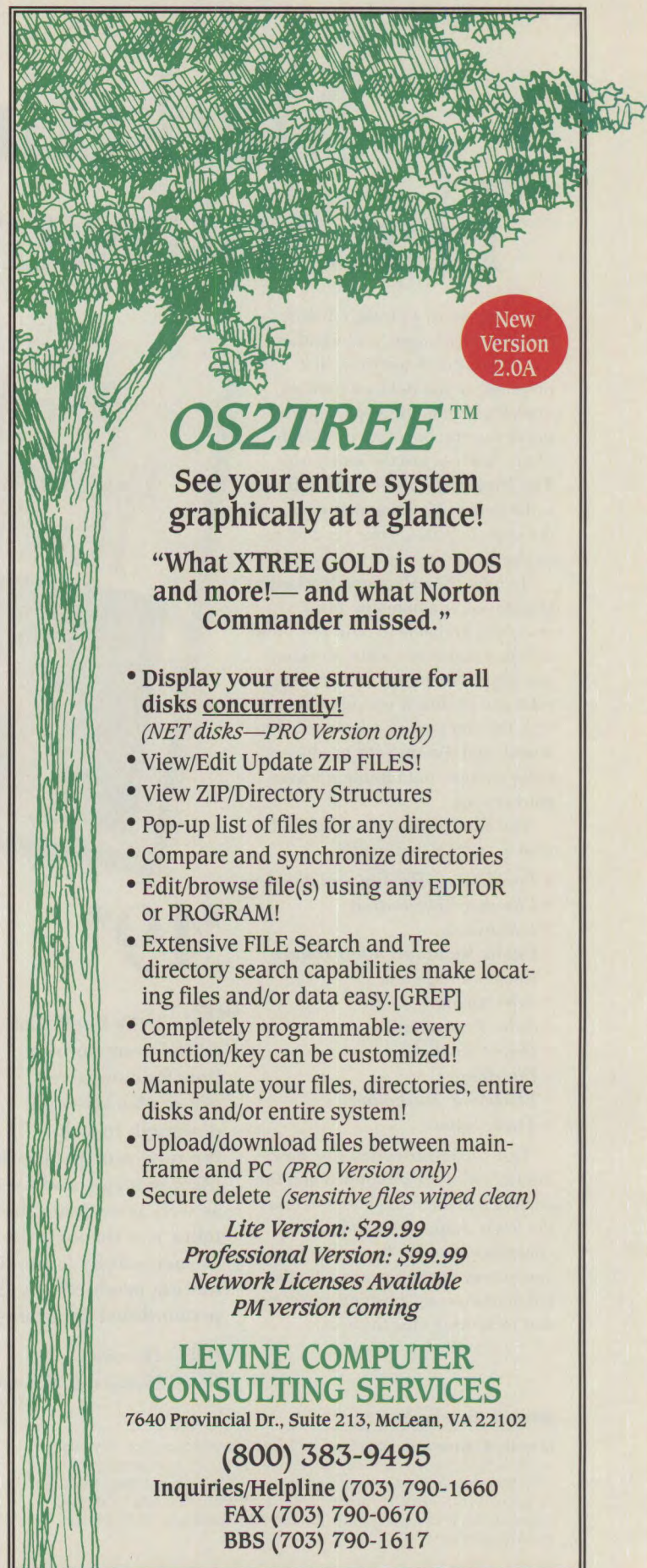
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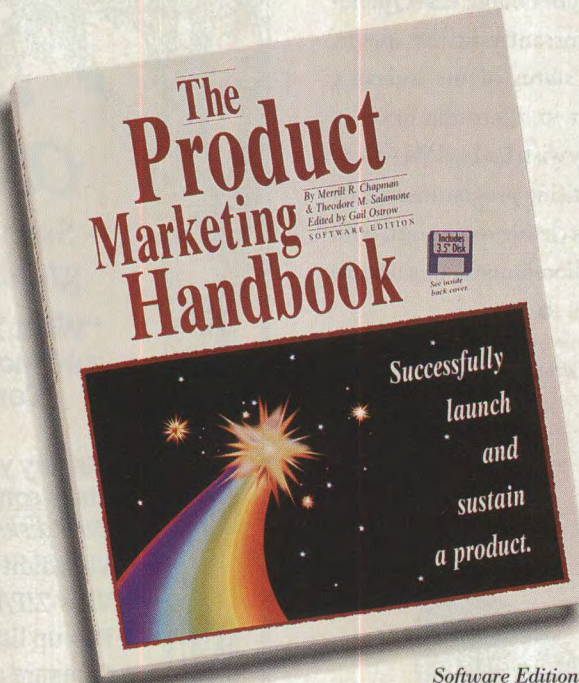
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Merrill R. Chapman has been in the software industry for 15 years and has seen firsthand the brilliant marketing techniques employed by industry giants and the catastrophic errors made by companies that are no longer in business. He presently consults with and trains marketing professionals in companies that include IBM, DataEase, SUN, Berlitz and WordPerfect.

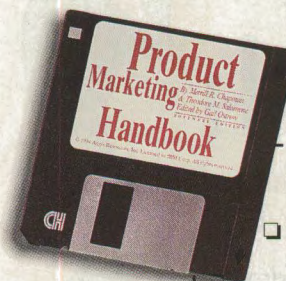


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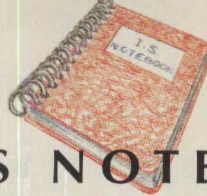
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THE IS NOTEBOOK

Tips and Techniques for the OS/2 Professional

CID Part II

BY GORDON SCOTT

Put your network to work for a change: let it install OS/2 for you. If you have a LAN Manager, Novell or TCP/IP network, you can rapidly deploy OS/2 Warp to your users over the LAN.

OS/2 provides CID (Configuration, Installation and Distribution) utilities in every copy. These tools make it easy for you to distribute your software over a LAN, and using them can save you and your users a tremendous amount of time—particularly if you must install OS/2 on more than half a dozen systems. The following steps will explain how to set up a system on the LAN from which other systems can install OS/2. The example procedures will be geared towards the use of a TCP/IP network, although this is not the only kind of network for which the CID utilities are valid.

These steps assume three things: first, you have a copy of OS/2 Warp on CD-ROM; second, you have TCP/IP loaded on a network system that also has a CD-ROM drive; and third, you are in compliance with all of IBM's licensing terms and conditions for installing OS/2 through a network.

Enable the server for remote installation of OS/2 on client machines.

- Copy the \OS2IMAGE directory and all its subdirectories from the CD to the drive from which you want your users to be able to install OS/2 over the LAN.
- (Optional) Remove the "read-only" attribute from the files you have just copied onto the network system. (Use this command: ATTRIB *.* -r /s)

The CID utility SEINST.EXE or the XDFCOPY command would create a similar structure, but I found that the preceding steps actually are faster and give an equally valid directory structure. The important thing about copying the files is that you copy *all* files from the \OS2IMAGE file and that the directory structure on your LAN system matches the CD.

Create the installation disks using SEDISK.EXE.

- Unpack SEDISK.EXE from the DISK_7 directory of your OS/2 Warp CD out of a file named CID. From the \OS2INSTALL\ directory of your boot drive, enter this command:
UNPACK x:\OS2IMAGE\DISK_7\CID
N:SEDISK.EXE
where "x" is your LAN drive to which the CD-ROM files were copied.
- Format two diskettes and have them ready to use.
- Enter SEDISK /S:x:\OS2IMAGE /T:a: where "x" is your LAN drive and "a" is the floppy drive.
- Place the formatted diskettes in drive A when prompted.

The user installing OS/2 from the LAN will need two special diskettes to boot from and to start the LAN connection. These disks are essentially the same as the OS/2 installation diskettes, but you will need to modify their contents so they can connect to a LAN.

The SEDISK.EXE program operates without a lot of feedback about what it is doing. You will know it has completed properly if it gives you a message that says the disks were "creat-

ed successfully." The two disks created by this program are a copy of the OS/2 Installation diskette and OS/2 Disk #1.

Prepare the network installation diskettes from which clients will boot.

- Modify the PATH statement in the CONFIG.SYS file on Disk #1 (the one created using SEDISK) to include the drive and directory from which you will be installing.
- Add all necessary device statements (for LAN connection) to the CONFIG.SYS file (see below).

[Note: The following steps are for TCP/IP networks only!]

- Delete the following files from Disk #1:
IBM2ADSK.ADD
IBM2FLPY.ADD
IBM2SCSI.ADD
CLOCK02.SYS
PRINT02.SYS
SCREEN02.SYS
- Add appropriate network files to Disk #1. Copy several files from two directories on the LAN system where TCP/IP is installed. [See below for details.]

This may seem like arduous work, but it isn't as bad as it looks. The notion behind this step is to modify the regular installation disks. This makes it possible for users to both load OS/2 from an existing file server and start the network from their client machine. The TCP/IP files can be copied from the directories on your LAN system where TCP/IP is already installed.

For more complete steps on implementing CID software distribution, you

THE IS NOTEBOOK

may want to purchase the CID guide *OS/2 Installation Techniques*. To purchase this book, call 1-800-879-2755 and order publication number GG24-4295. This book is the definitive source of information for remote installation, and includes a disk with sample code and helpful batch files to implement your remote installation setup. The book covers information for LAN Server networks, TCP/IP networks, and Netware networks. It is a must have for any IS shop that has to oversee the installation of anything more than a dozen systems.

Files to add to Disk #1:

```
IBMCOM\DLL\LANMS
GDL.DLL
IBMCOM\LANMSGDD.OS2
IBMCOM\LANMSGEX.OS2
IBMCOM\PROTMAN.OS2
IBMCON\PROTOCOL.INI
IBMCOM\PROTOCOL\NET
```

```
BIND.EXE
\IBMCOM\PRO.MSG
\IBMCOM\LT2.MSG
\IBMCOM\LT0.MSG
\IBMCOM\MACS\IBMTOK.OS2
\TCPIP\BIN\CNTRL.EXE
\TCPIP\BIN\NFS200.IFS
\TCPIP\BIN\IFNDIS.SYS
\TCPIP\BIN\IFCONFIG.EXE
\TCPIP\BIN\INET.EXE
\TCPIP\BIN\ARP.EXE
\TCPIP\BIN\MOUNT.EXE
\TCPIP\BIN\NFSCTL.EXE
\TCPIP\BIN\NFSBIOD.EXE
\TCPIP\BIN\TCPIPDDL.DLL
\TCPIP\DLL\RPCDDL.DLL
```

Lines to Modify in CONFIG.SYS:

```
SET PATH=;C:\OS2;C:\OS2\SYS
TEM;C:\OS2\INSTALL;
x:\os2image\disk_1 Lines to
Add to CONFIG.SYS:
```

```
SET
SOURCEPATH=x:\OS2IMAGE
DEVICE=LANMSGDD.OS2 /I: A:\
RUN=\LANMSGEX.EXE
DEVICE=\PROTMAN.OS2 /I: A:\
DEVICE=\IBMTOK.OS2
DEVICE=\INET.SYS
DEVICE=\IFNDIS.SYS
RUN=\NETBIND.EXE
SET ETC=A:\ETC
SET TMP=A:\ETC
TIMESLICE=100,100
RUN=\CNTRL.EXE
IFS=\NFS200.IFS
SET HOSTNAME=NFSREQ. ♦
```

Gordon Scott works for the Electronic Publishing group at IBM, which offers services in developing online information for CD-ROM or Internet distribution. Gordon's e-mail address is GBS at VNET.IBM.COM and the Electronic Publishing group can be reached at 1-800-926-0364.

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HANDS ON

continued from page 42

aging servers. The others would have been icing on the cake. I found PM Patrol a breeze to install, unlike some similar products. The manual is short, to the point and explains all the functions of PM Patrol in understandable language.

For those who need or want to know what OS/2 is doing with its systems resources, I recommend you add PM Patrol to your tool box of OS/2 utilities. ♦

Kelley Shaddrick is director of networking and technical support at EBP Healthplans, Inc. He can be reached via the Internet at kshaddri@mr.net.

AT A GLANCE

PM Patrol

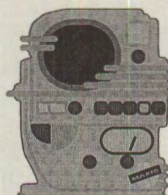
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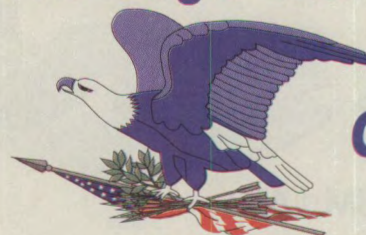
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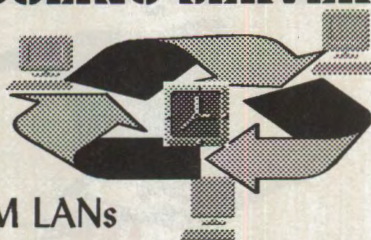
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68 OS/2 Professional July/August 1995

SPECIAL REPORT

lessly with just about any combination of commands and applications your creativity conjures.

At first glance the Agent is a goofy looking cartoonish feature, designed with more of an eye on cosmetics than functionality. But, by allowing even the most computer illiterate enduser to create customized Instruction Books for the automation of certain tasks, the Agent function is the key to unlocking WorkGroup's flexibility and power. For fun, the Agent's appearance can be changed from cowboy to businessman or other caricatures and can even be named. We named ours Robert, but we were later inspired to change it to Bob.

As a rules-based task and data manager, the Agent can automate such tasks as mail sorting, data back up and file processing. For example, if Steve Mills wants all incoming mail from a particular user—say Louis Gerstner—to be saved to a particular directory called Memos from Lou and then printed out, an Instruction Book can be created to automate the task. Using the Parts Palette, the user defines the event (Mail Arrives), the condition (Mail is from Lou Gerstner or contains specified text) and an action (print mail and save to specified directory). The construction of Instruction Books is entirely object-oriented and a very intuitive process. The Agent's ease of use belies its power and we've only just begun to really discover its ability to automate tasks.

In fact, one legitimate concern voiced by a few users is that the Agent looks so silly that few will explore its range of features. One way to avoid this would be to include a set of Instruction Book templates that would automate such standard tasks as scheduling backups and sorting mail. If the user sees what the Agent function is capable of, he might be more likely to create his own Instruction Books for other tasks. In reality, Agent is an IS manager's dream: big, smart, powerful and easy-to-use for the computer illiterate executive.

Louis Gerstner has defined groupware as the third wave of computer software and WorkGroup is IBM's Warp-speed contribution. IBM sources say that its importance in light of the new Lotus acquisition is paramount. No wonder key SWS executives were deeply involved in the decision and implementation of the Lotus buyout. WorkGroup's initial rollout is exciting. Within a year, WorkGroup will add the two extra modules and begin adding usability features to migrate it down the corporate pyramid. When that happens, IBM's next generation of software will be in high gear. And businesses worldwide will feel it. ♦

OS/2 AND NETWARE PROGRAMMING

by Lori Gauthier, Morgan Adair and Wayne Taylor
John Wiley & Sons, Inc., 457 pages, \$29.95

REVIEWED BY OLIN ATKINSON

The multithreaded power of OS/2 is ideal for network programming. So you get the NetWare client SDK and start going through the manuals. You read about several functions and look at a couple of sample applications and begin wondering, "How do I put this all together?" That's where a new book by Novell experts—*OS/2 and NetWare Programming*—comes in. This book is for all OS/2 NetWare programmers, from beginners looking for a place to start to experienced programmers looking for new ideas and a bigger picture.

The authors begin by stating that they want to give a more comprehensive understanding of the SDK. They suggest that to get more *nitty gritty* from the different SDK functions, readers need to go to the SDK doc itself. They then divide most of the topics into either the theory or the sample application chapter, so that if programmers already know the theory they can go directly to the application chapter and get dirty. For me this seemed to make the theory reading more enjoyable and less distracted by example. In some places they include reference or pseudo code but only when it is really the best way to explain the concept. The authors also chose not to print all the code for their sample applications in the book since it is available on the accompanying disk. Just don't lose that disk. Since they really don't spend a lot of time in the code itself and often use pseudo code to explain sample applications, users will want to refer to the real code eventually for a thorough understanding.

To stay focused on the relatively large task at hand the authors chose to address only the NetWare client proprietary concepts and only mention TLI, Named Pipes and NetBios where they are important to NetWare clients or formats. And they don't dis-

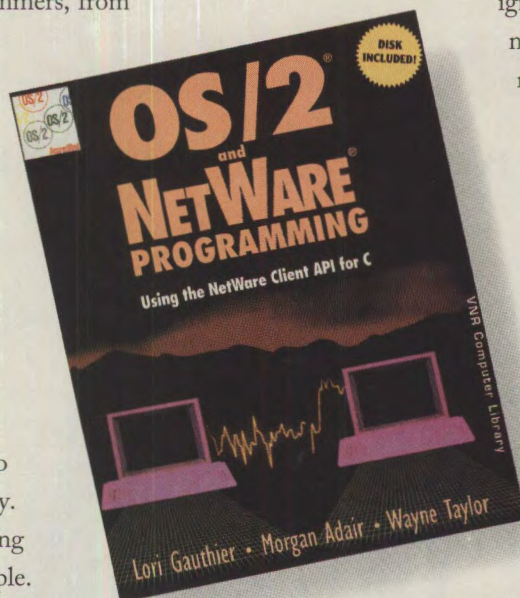
cuss them in any depth. What they do is give you a good idea of the interrelation between the various SDK functions that the documentation fails to give, and they manage to throw in some very useful hints that may not be documented or are hidden deep in the recesses of NetWare. The authors note that they don't know everything and that they purposely ignored some points. I looked for those missing points, however, and didn't notice them; probably because the authors cover as much as they do.

The first few chapters present the interrelationship between OS/2 and the NetWare requester, networking fundamentals and the NetWare Requester itself. Then they get into the SDK, explaining its structure and quirks, followed by a guide to the documentation that I really appreciated. You also get your first sample code—a small "Hello World"ish application.

They then discuss internationalization. Working in localization myself and knowing the importance of enabling, I really appreciated this discussion and its location.

The fun begins with the chapters on the bindery and NetWare Directory Services (NDS). The discussion is excellent and yet quite succinct for the nature of these beasts. The sample programs are tools to dump the bindery and Directory to the screen. These weren't bad, but were not overly inspiring either. I would have liked an example of modifying bindery and NDS objects.

The next chapters cover connection services, with examples of map and logout utilities. They are followed by security, auditing and the file system, each of which has an example that dumps the



BOOKSTAX

information related to its particular service. The security and auditing chapters presented some helpful code, but formatting problems made it a tad distracting.

The next few chapters are my favorites. They cover queue management and provide an excellent example of a build server that services compile and make jobs. They continue with accounting services, transaction tracking, IPX and SPX and service advertising and routing, most of which add to or modify the build server. The information in these chapters is really interesting and loaded with valuable tips and examples. This is where the text really pays for itself: the discussion and examples are excellent. I particularly appreciated discussions on the use of multiple threads to take advantage of the power of OS/2.

The book ends with discussions of network configuration diagnostics and server environment services theory and examples.

These chapters cover very large topics that deal with numerous data structures. They do their best to offer a basic overview and help show interrelation.

In essence, this book is no replacement for the SDK manuals. But it does help greatly in bringing a complicated set of APIs together into a strong and powerful tool for harnessing the network. Specifically written for OS/2 and not just some port of a "windoze" networking manual, and *OS/2 & Netware Programming* can really help you take advantage of network programming in a multithreaded 32-bit environment. ♦

.....
Olin Atkinson, an electrical engineering graduate from Brigham Young University, works as a software engineer in Novell's International Product Development Department.

Mastering OS/2 Warp

by Peter Dyson, Sybex, 1,245 pages, \$39.99

REVIEWED BY KEN MACKIN

Earlier this year I went to one of the big retail chains and searched high and low for a book on Warp. I saw plenty of OS/2 2.11 books. Plenty of the typical novels about Microsoft products with slip-sliding ship dates, but no books on Warp. I didn't know why the titles were so old and lame, until I noticed that I was in ComputerLand Express—the despised recipient of Ken's First Annual *Worst Retail Store Award*. So imagine my delight when *OS/2 Professional* called about writing a review of *Mastering OS/2 Warp* by Peter Dyson published by Sybex in Alameda, California.

If you read this book from cover to cover, you will be overwhelmed by the breadth of coverage. You will also notice that it quickly covers some of the highly technical subjects that both enthuse and buffalo users of Warp. The book is big enough to

have kept an abbey of monks scribbling and scratching for months. *Mastering OS/2 Warp* starts out correctly and completely describing the numerous reasons why Warp is just light years better than other operating systems for the Intel platform.

Truth and beauty are related, but Dyson's matter-of-fact style makes a refreshing departure from the verses of fundamentalist rhetoric laid on us by the would-be deacons of enduser doctrine. Dyson tells a great story in a plummy, understated kind-of-way. The book's 24 stone tablets include more than 100 pages of

coverage on Warp's Internet access, and more than 200 glorious pages on the BonusPak. Since IBM avoids documentation about the BonusPak except in on-line tomes, Dyson's inclusion of well written (by silent coauthor Gene Weis-



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skopf) info on IBM Works, FaxWorks for OS/2, OS2-CIM and Person to Person for OS/2 goes a long way to atone for IBM's peccadillo.

Failed to Connect

Where Dyson really missed the caravan is in the book's last chapter. His coverage of the many issues involved in networking OS/2 Warp is scant indeed. It's almost as if he believed that he needed a chapter on networking, but didn't want to write one. There are dunes piled high with empirical and anecdotal information about networking Warp that could have been dug up and included. In fact, I'd bet the folks in IBM Austin would have been happy to help him. Coverage of networking is especially important with the release of Warp Connect, which according to many beta testers could be the most important version of OS/2 ever. Chapter 24 is really for networking novices. Perhaps that's why Dyson put it last.

Also, Dyson only casually mentions CICS for OS/2 (customer information control system). CICS is IBM's OS/2 killer app. It allows one machine to control the actions of many others. It permits a company to build solid, somewhat distributed transaction processing systems that talk to mainframes, minis, servers and PCs.

For Whom the Bell Tolls

In the world of OS/2 Warp literature this book is solidly in the middle of the bell curve. It excels in many areas and falls short in others. Perhaps that's inevitable with such a broad scope. Still, if you despise on-line documentation, *Mastering OS/2 Warp's* through coverage of the BonusPak, its solid info on performance tuning and cool config tricks and its helpful chapter on REXX make it a contender if you want to go from Warp 3 to Warp 9. Just as most people don't read the Bible from cover to cover, you probably won't want a "linear experience" with this book. But for ready reference it fills a nice gap in my bookshelf after I forgave it the "sins" of occasional superficiality and redundancy to the documentation. ♦

Ken Mackin is president of Product Logic, an Atlanta-based industry consulting firm. He can be reached at 76004.3626@compuserve.com. Mackin is waiting for better Ultimail tools before giving out his IBM.NET address.

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Connect to Home Users

BY JERRY POURNELLE

I first saw Warp Connect at Fall Comdex. I liked it enough to offer to test it, but IBM apparently wasn't sending beta test copies to the press. In March Microsoft sent final beta copies of Win95. I found several problems, and I expect I wasn't alone, since they sent me two more builds in April.

Meanwhile, I was running both Red Label Warp (you have to furnish your own Windows) and Blue Label Warp (WIN-OS/2 is built in). Both flavors work quite well, but installation was tricky enough that I wondered about all the advertisements pitched to Sister Elizabeth Ann and her net-surfing friends, and I kept hearing rumors that quite a few people gave up on installation and returned Warp to their retailers. Those who did get it working seemed pretty happy with it, which squares with my own experience.

My OS/2 installations also run OS/2 LAN Server and communicate with each other, with Windows for WorkGroups and Win95. Getting that set up was tricky because the simple installation assumes your net board is set to IRQ3 and offers you no opportunity to change that, while the custom installation has several screens that I found hard to understand. I had mentioned all this to the Warp Connect product manager and heard that they fixed most installation problems. Thus I was really looking forward to Warp Connect.

Alas, I'm still looking forward to it. Although Warp Connect has been on sale for over a week, no copies were sent to the press, or at least not to any press people I deal with. I'm told a copy is on the way, but I'm already past deadline on this column. So it goes.

I was also told that the reason there were no press copies is

that Warp Connect is intended for corporate and business markets, and probably wouldn't interest home buyers. This conclusion was based on extensive market research by IBM and consultants. It may be true, but I doubt it. First, note that Win95 has peer to peer networking built in, and today if you buy Windows you get Windows for WorkGroups whether you ask for

it or not. Microsoft does very little without a good reason. Second, recall that a few months ago I told you that the real market for very high end machines—Pentium chip, 16 or more megs of memory, gigabyte or larger hard disk, fast video board, triple or quad speed CD-ROM, wave table sound board—is the home market. Intel believes this. Microsoft believes this. The home market is where the real action is just now. Note, though, that most of those high end machines are sold into homes that already have a computer. And, while the real reason for getting that high end machine is to play games, that's probably not what

the customer says the machine is for. The ostensible reason is very likely to be business related. Even where that's not true, now that network cards are cheap and getting cheaper, there's generally a strong desire to link the two machines into a simple home network. Certainly Microsoft believes that.

Since I don't have Warp Connect I can't say for sure how easy it is to install, but I'm told that both the OS installation and communications setup are much simpler than with previous versions of Warp. If that's true, then IBM finally has something to market to the home user, including Sister Elizabeth Ann. If it's not true, then someone at IBM ought to be giving the order, "Make it so, Number One." ♦



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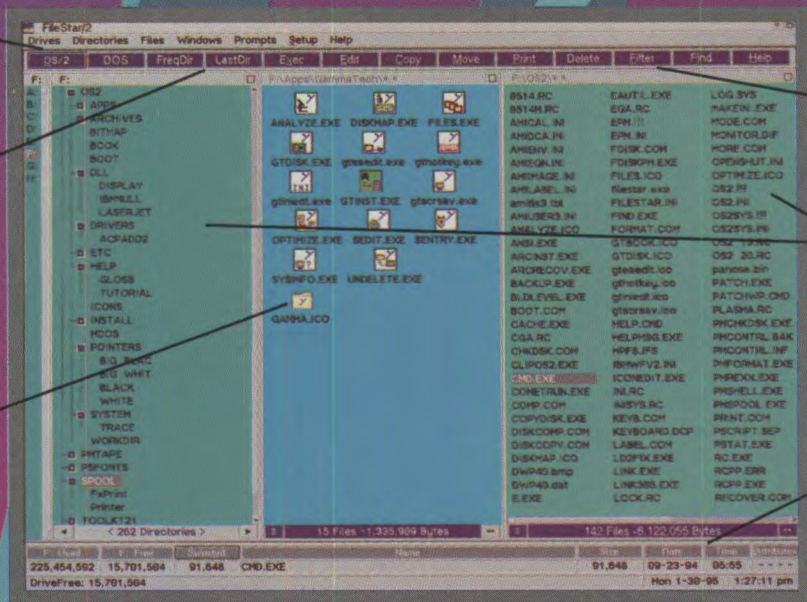
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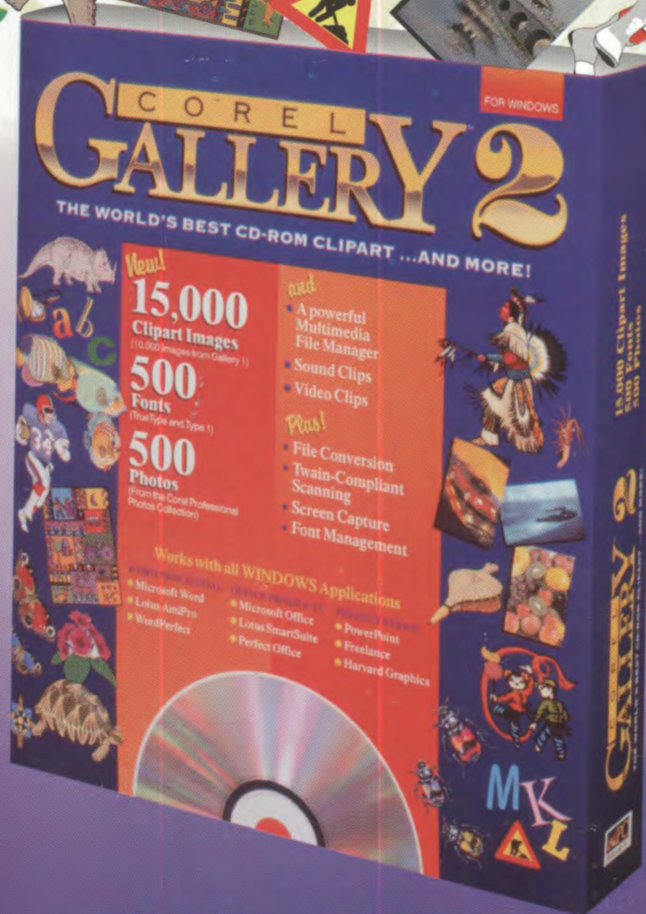
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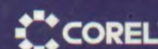
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